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SPECIAL REPORT: THE CUSTOMER AGENDA PAGE 60



PLUS

**Executive Ed:
Six Days To
Enlightenment!**

Our writer noshes his way through Wharton's quickie e-commerce curriculum. PAGE 90



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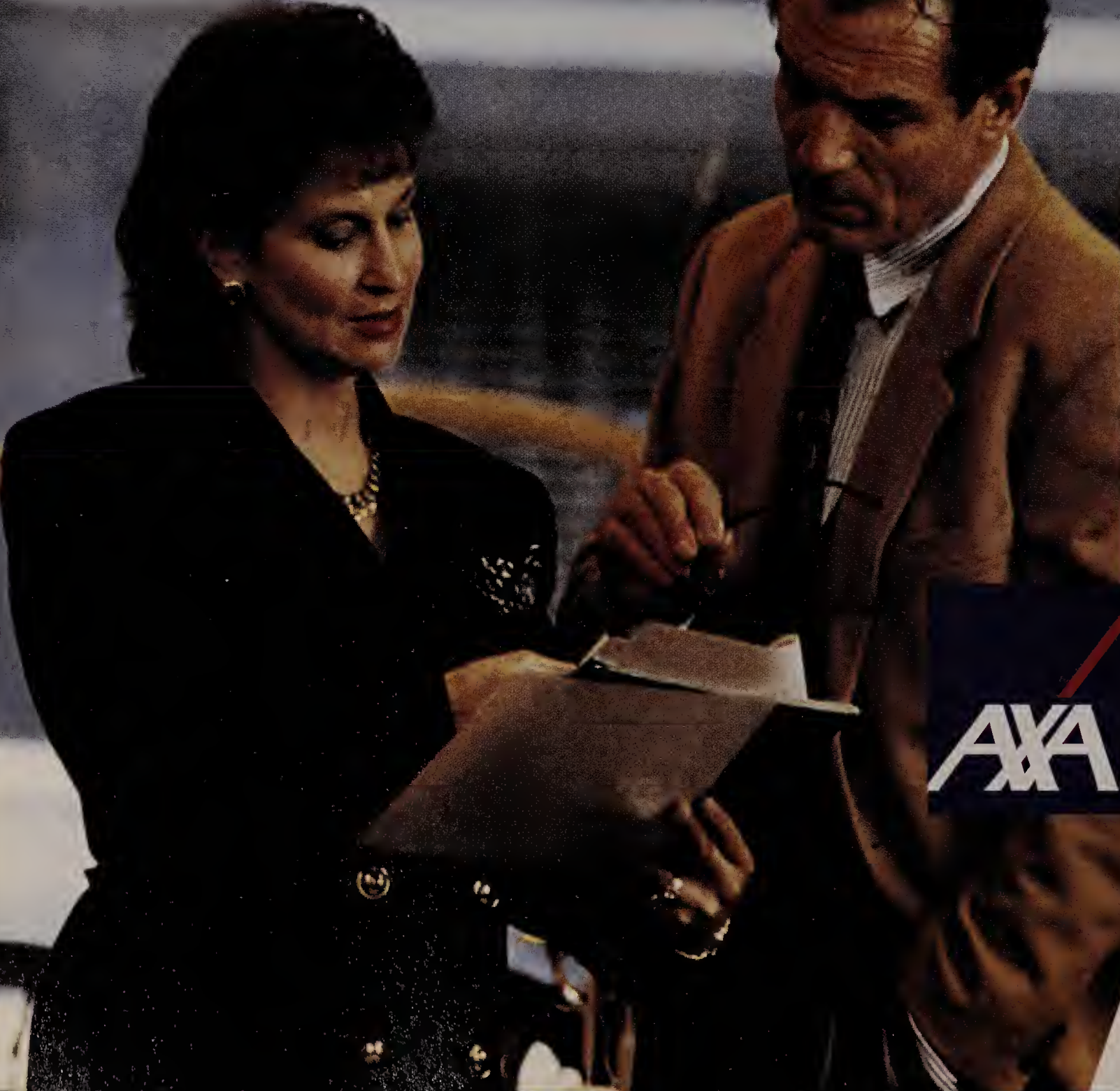
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VOL. 1 NO. 8 • MAY 2001

features

50 P.O.'d

PROJECT FAILURE Mail Boxes Etc. spent \$25 million to position itself as the real world's shipping partner to the virtual e-tail space. One problem: The technology doesn't work. *By Lauren Gibbons Paul*

SPECIAL REPORT: THE CUSTOMER AGENDA

60 Harrah's Knows What You Did Last Night

Harrah's is betting on a service-oriented strategy made possible by IT to win customers' loyalty. So far, the gamble is paying off. *By Meridith Levinson*

70 Thinking Small

Best Buy wants to make its gigantic stores feel like mom-and-pop shops. Can technology help make it happen? *By Meg Mitchell Moore*

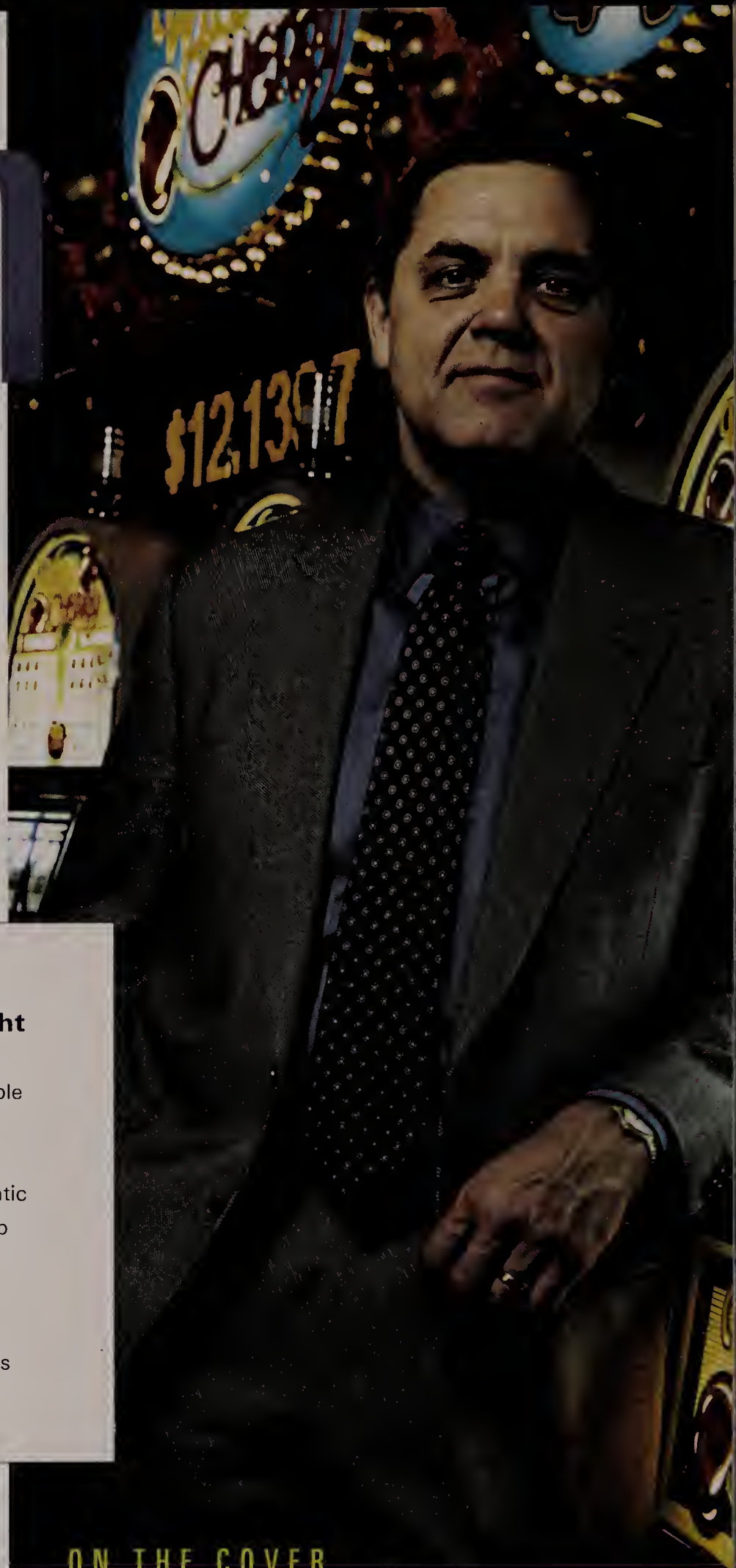
81 Do You Really Need a Customer Czar?

Here's how to figure out if a chief customer officer makes sense for your company. *By Steve Ulfelder*

90 Six Days to a Higher I.Q.

E-BUSINESS BOOT CAMP At Wharton's weeklong class on e-commerce, count on 12-hour days, plenty of homework and, thank goodness, rack of lamb. *By Todd Datz*

continued...



ON THE COVER

In a cutthroat environment, Harrah's CEO Phil Satre used IT to return to the company's mission: Serve your customers well and they will be loyal.

COVER PHOTO BY MICHAEL KELLEY

Not Just Another Pretty Interface.



Introducing Jasmine[®] *ii* Portal. The eBusiness Workplace That Empowers Your Organization To Win At eSpeed.

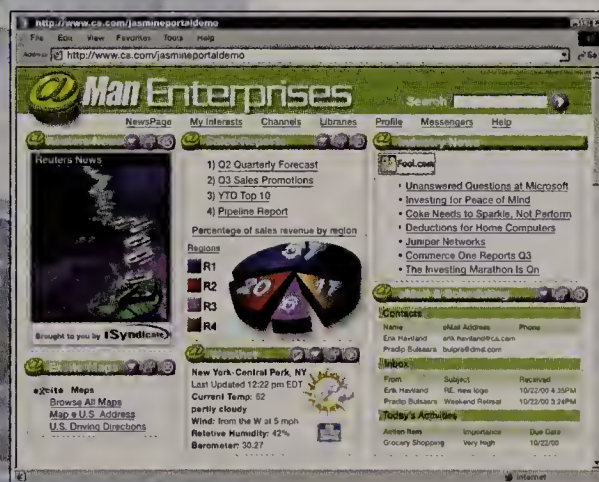
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Jasmine[®] *ii* Portal

in every issue...

10 Editor's Letter

16 Buzz

Innovation Looms Large • The Darwin Meter • The Human Touch • A Help Group for Insecure Vendors • If You Don't Like TV, Don't Work Here • Building a Better Padlock • Phones for a Cause

Edited by Todd Datz

42 All Talk, All the Time

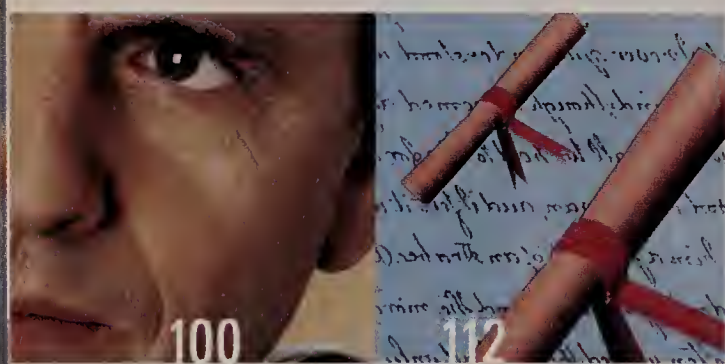
ECOSYSTEM Can speech recognition systems deliver real business benefits? *By Scott Kirsner*

46 A Matter of Trust

CONTACT Will customers think better of your company if it adopts privacy principles? *By Alice Dragoon*

98 Netropolis

Here's Help for Application Anxiety • Mini Web Guide: Security • Netpreneur: Shuki Preminger • Scrambling to Improve Online Security *Edited by Todd Datz*



104 Truth or Consequences

SPIN CYCLE How do you know if a vendor will deliver on its promises? When checking references, you'd better ask the right questions. *By Wayne E. Pollard*

110 Company Index

112 What Is E-Learning?

LEARNING CURVE *By Meg Mitchell Moore*

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The Customer Agenda

Customers are the most recent obsession of many businesses. Even in industries whose relations with customers have historically ranged from lukewarm to downright unfriendly, everyone now seems to want to buddy up and be intimate. And despite the darkening of the economic horizon, that's not likely to change.

A new category of technologies has sprung up to cater to this customer mania. Known as CRM—for customer relationship management—these systems and services are rolling out of vendor (and consulting) test kitchens at a breakneck pace. But whether your main focus is on serving your customers, studying them, delighting them, enslaving them or ruthlessly exploiting them (and perhaps all of those things), understand from the outset that the degree of difficulty in managing your customers is amazingly high—much higher than a lot of the vendors might like you to think.

The dirty little secret about this area of technology (and, indeed, many others) is that the technology itself is arguably the least of the critical success factors. The challenge is rooted most deeply in organizational culture, strategy, vision, executive leadership and commitment. Yes, technology allows you to do some things that would otherwise be impossible, but expensive software and long

consulting engagements won't compensate for a shortage of any of those *other* ingredients.

But since it's nearly impossible these days to find a software or service vendor that isn't at least claiming to offer a CRM "solution" (smart dogs don't sniff where there's nothing to smell), you can bet there's gold in them thar hills. It's not a bad bet. Companies across all industries are eager to bear down more effectively on getting top value out of each and every customer interaction—a worthwhile objective. That's why we've assembled a package of stories this issue that looks at the customer agenda from three angles.

First, we chronicle the achieved successes of Harrah's Entertainment (see Senior Writer Meridith Levinson's profile, "Harrah's Knows What You Did Last Night," Page 60). Next we have contributing writer Meg Mitchell Moore's story about a CRM work-in-progress: electronics retail giant Best Buy's strategic shift from a product to a customer focus (see "Thinking Small," Page 70). Finally, we take a look at how some companies are opting to create a new C-level executive position that many have dubbed the CCO—chief customer officer. No, it's not exactly a groundswell yet, as contributing writer Steve Ulfelder's feature makes clear (see "Do You Really Need a Customer Czar?" Page 81). But the goal of the position is to have somebody focus intensively on customer care and its somewhat gnarlier sidekick, customer exploitation.

Whatever you want from your customers—whether it's higher per capita profitability, better insight into their needs or slavish devotion to your brand—the process of making those wishes come true involves a board-level commitment and a whole lot of work. But if Harrah's impressive results inspire you, the work and commitment could pay off in spades.

Is CRM your strong suit? Let me know: mccreary@darwinmag.com.

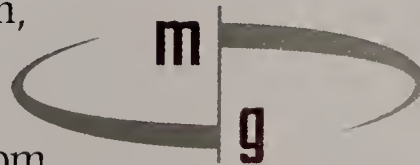
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In 1969, we worked on a
SECRET GOVERNMENT PROJECT
that became the Internet.

OHHH, SO THAT'S WHY NOBODY KNOWS WHO WE ARE!

Back in the '60s a small band of computer whizzes was hired by the Department of Defense to work on the ARPAnet. Or what is commonly known as the forerunner to the Internet. These visionaries came from the legendary research and development company, BBN.

Government work being what it is, there wasn't a lot of publicity about this.

Their work did, however, yield many firsts. The first router. The first e-mail message. The first network packet encryption technology and more.

Years later GTE acquired BBN and invested billions to expand their existing infrastructure into a 17,500-mile, Tier 1, fiber-optic global network.

Spun off from GTE last year, this powerhouse of Internet services

is known today as Genuity.™ With Data Centers strategically located around the world and Network Operations Centers continually monitoring security and bandwidth for serious eBusinesses everywhere.

Innovation is in our blood. And now we've combined our expertise in Web Hosting, Internet Access, Transport and Security into an integrated eBusiness Network Platform called Black



Black Rocket™
is Genuity's
eBusiness
Network Platform.

Rocket.™ Our "Rocket Engineers" can ensure your project runs smoothly from the start, allowing you to reduce the cost and complexity of building and deploying eBusiness.

To put our 30 years of experience to work on your eBusiness, visit www.genuity.com/blackrocket or call 1-800-GENUITY.

**A BRIEF
HISTORY**



In 1969, BBN was hired by the U.S. government to develop the ARPAnet, the forerunner of the Internet.



INTERNETWORKING

In 1997, BBN was acquired by GTE, the company that created our high-speed, 17,500-mile, Tier 1, fiber-optic network.

GENUITY

In 2000, GTE Internetworking became an independent company, renaming itself Genuity. Today, Genuity offers a vast array of managed Internet services, including Black Rocket.™

GENUITY™



McGahan thinks large companies have taken a bad innovation rap.

Innovation Looms Large

INDUSTRY LIFE CYCLES Most of us assume that small means entrepreneurial and nimble, large means bureaucratic and plodding. So it stands to reason that small companies eat large companies for lunch when the menu item is innovation, right? A recent study, "How Does Innovation Activity Change as Industries Mature?" says that just ain't so.

Anita McGahan, a professor of strategy and policy at the Boston University School of Management, and **Brian Silverman**, an assistant professor at Harvard Business School, took a look at three traditional assumptions regarding innovation.

1. It's high during emergent stages of industries, then declines as those industries mature.
2. It's product-oriented as an industry emerges, then becomes process-oriented as the industry matures.
3. Industry leaders in mature industries have less incentive to innovate than those in nonmature (emerging or declining) industries.

To test those theses, McGahan and Silverman looked at patenting activity in the American economy between 1981 and 1997. (Though not perfect, patent count is an academically accepted measure of innovation.) The empirical results refuted each of the three assumptions. First, the authors found that patenting activity is at least as great in mature industries as in emerging industries. Second, they discovered that emerging industries have at least as high a proportion of process-oriented innovation as mature industries. Third, the study showed that leaders in mature industries are just as innovative as leaders in nonmature industries.

The findings suggest that industry life-cycle models based on stages of maturity may not accurately describe innovative activity. Rather, models based on the pace and kind of innovation may be more appropriate. "It's much more fruitful to see how open your industry is to absorbing new technologies," says McGahan, not at what stage your industry stands in the life cycle.

McGahan believes good customer relationship management is critical too. She cites Bertelsmann's deal with Napster: "Instead of forestalling the new technology, it thought very carefully [about] how the market for music is changing and how it can respond and deliver music the way the end customer wants it."

—Todd Datz



The Darwin Meter

EVOLVING	DEVOLVING
<i>The O'Reilly Factor</i>	<i>Larry King Live</i>
B-school grads launching careers at old economy companies	B-school grads launching companies
Layoffs at Cisco	The invincibility of John Chambers
Niche channels, such as Food Network	Broad channels, such as USA Network
The number of Palm applications	Traveling with your laptop

B U S I N E S S M O D E L O F T H E F U T U R E

C O M M E R C E O N E

Leads *the* **Evolution**
of the
E-Marketplace

E C O S Y S T E M

*Realizing the full potential
of the business Internet through
B2B e-marketplace solutions.*

"AS THE EVENTS OF THE PAST SEVERAL YEARS clearly indicate, the impact of the Internet on the business world in the short term has been somewhat overrated," says Mark Hoffman, CEO of Commerce One®.

"But, on the other hand, the Internet's impact on business over the long term has been vastly underrated," he adds. "In fact, this technology is bringing about the most significant structural change in business since the industrial revolution. It's hard to realize the magnitude of the changes that will take place because we are just at the threshold of a new era."

Hoffman points out that the first movers in the Internet revolution were small, agile, upstart companies that attempted to out-flank the established brick-and-mortar behemoths. But for a variety of reasons, the dot-com party has quieted. Companies like Boeing, General Motors, Ford, DaimlerChrysler, Deutsche Telekom, BT

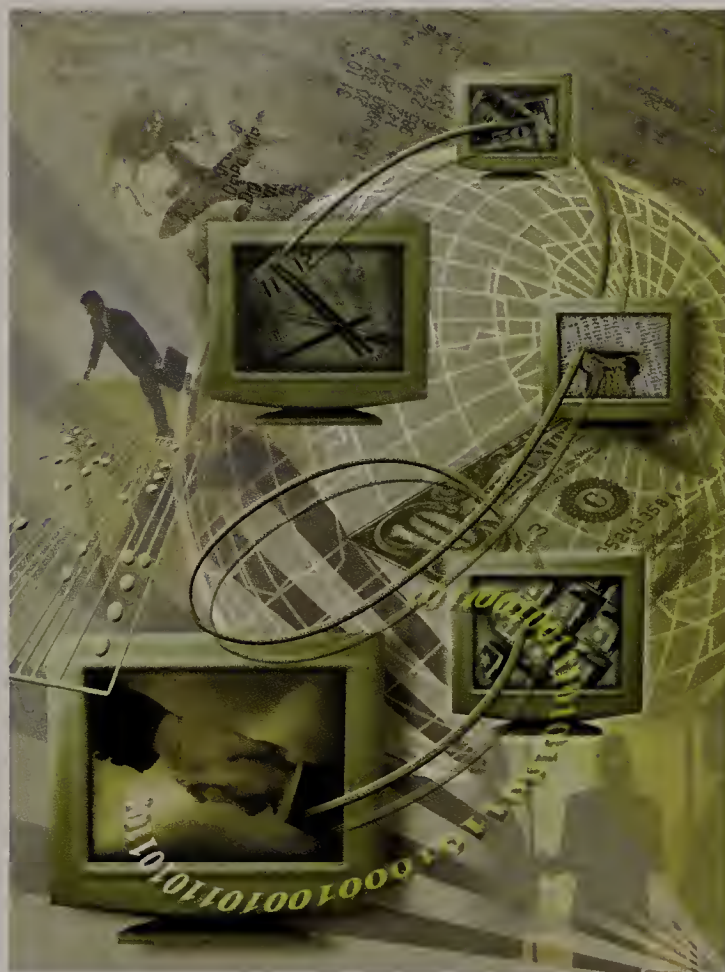


Illustration by Cameron Beck

and NTT are now moving deliberately and successfully into e-business.

The Internet allows these companies to solve traditional business problems in new ways—providing yet another round of business efficiency improvements. But it also allows these organizations to address a completely new set of business problems and opportunities, specifically those represented by the improvement in inter-entity communication and collaboration. It is this new class of solution that

darwin

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Accenture helps Exostar launch an e-marketplace for the aerospace and defense industry

Exostar is a new “electronic marketplace” spearheaded by four of the aerospace & defense industry’s leading players. Like many e-marketplaces, it is an independent business entity open to all suppliers and buyers within the industry.

However, Exostar is set apart by its commitment to collaboration and business value. In addition to gaining transactional efficiencies, Exostar constituents join forces on product design and program management, and work together to build supply chain synergies. Exostar’s e-marketplace is positioned as a productivity tool that also helps companies become more effective players in the \$200 billion global A&D industry.

Shift from point-to-point interactions

Goldman Sachs estimates that by 2004, 35 percent of all B2B transactions in the aerospace & defense industry will be done over the Internet. Four industry leaders—BAE Systems, Boeing, Lockheed Martin and Raytheon—quickly recognized the magnitude of such a shift: away from traditional point-to-point interactions and toward a new “eHub” model built around relationships. Each company thus began work on an independent exchange-development initiative. However, they soon recognized that the preferable course was to work together to create a single e-infrastructure that would be far more powerful and efficient.

Thus began an ambitious association among the industry’s leading competitors to create a better way of doing business through technology and collaboration. Assisted by Commerce One (technology provider) and Accenture (solution strategist/developer/integrator), BAE Systems, Boeing, Lockheed Martin and Raytheon set out to address A&D exchange needs in three key areas: procurement of non-production components, collaborative design of key A&D products

and systems, and acquisition of spares and maintenance items for airlines, aviation operators and the defense industry.

Accenture plays multifaceted role

From the outset, the agreed-upon strategy was that buying and selling would be part of a more comprehensive, collaborative environment. For this reason, Accenture’s involvement spanned numerous contexts, such as operations, buyer/partner integration, supplier adoption, marketplace creation, marketing and business development, product/service strategy and financial strategy.

To support these directions, a battery of operating committees—legal, HR, technical, government relations, PR and an overall executive steering committee—were formed, each of which was staffed by decision makers from the four companies. This structure helped to tee up and support rapid decision making.

From there, a highly potent organization with an exceptionally short gestation was born. From May 2000 to August 2000—120 days—the Accenture team successfully:

- Designed the company’s business architecture
- Created detailed designs of Exostar’s products and services
- Designed and built the first release of indirect procurement and auctions
- Designed and staffed the organization
- Launched the front and back office operations
- Launched the Exostar name and brand
- Launched the Exostar.com e-marketplace

In less than six months, Exostar evolved from a good idea to a unique e-company that helps members of the A&D community buy and sell more efficiently, and work together to design and move products more effectively.

offers the real potential of Internet-based business solutions by using the power of the Internet to forever change the nature of their business-to-business (B2B) relationships.

This new class of business solutions is called e-marketplace. An e-marketplace is an Internet-based business technology solution

focused on inter-entity business processes. It uses the Internet to optimize the communications and collaboration between the enterprise and its trading partners to reduce cycle times in such key areas as product design, inventory turnover, and time to market. Ultimately, e-marketplace solutions

are the key to realizing the still unrealized full profit potential of the Internet and B2B e-commerce.

Fast Growing World of B2B

“The previous 18 months have witnessed dramatic changes in the world of B2B e-commerce, which has become a reality for a few com-

panies and a possibility for nearly all companies," notes Dr. Leo Lipis in a recent research report, *Worldwide E-Marketplace Services Market Forecast and Analysis*, issued by IDC, Framingham, Mass. "The number of e-marketplaces seeking to serve their needs has been increasing at a rate that makes one's head spin."

According to the IDC report, worldwide demand for e-marketplace services, pegged at \$2.5 billion in 1999, is expected to reach \$15.1 billion by 2004.

Other research firms are even more sanguine about B2B prospects: ActivMedia Research expects B2B sites to triple their revenues this year to reach \$134 billion. Jupiter Research predicts worldwide on-line B2B spending will reach \$137.2 billion by 2005. Other firms, such as Gartner Group and Goldman Sachs are estimating revenues in the low trillions in the next four to five years.

Even though the projections differ widely, depending on how the various research houses define the B2B marketplace and their number-crunching methodology, one message comes through loud and clear—the potential is enormous.

Responding to this potential, a new breed of Internet entrepreneurs are creating electronic marketplaces that are already beginning to have a major impact on companies ranging from the Fortune 500 to the smallest enterprises. This new business model is causing changes to ripple through the entire industry, transforming the organization's relationship with its trading partners and customers as well as its internal pro-

Tradecom.pt—Portugal's First B2B E-commerce Company

Founded in February 2000 by Commerce One and three leading Portuguese corporations, Tradecom.pt's mission was to lay the foundation for business-to-business e-commerce for Portugal.

According to Diogo Horta Costa, director of marketing and communications at Tradecom.pt, this seemingly revolutionary objective was a realistic extension of the extensive technological knowledge and market access of its parent companies, Portugal Telecom and leading financial institutions Banco Espirito Santo and Caixa Geral de Depositos.

"Portugal Telecom wanted to create a new venture to increase shareholder value," said Horta Costa. "It made sense to begin with the business-to-business community in which they already participated and apply their expertise."

Tradecom.pt's e-commerce plan had four main objectives. First, the company wanted to create a horizontal e-marketplace that served business across multiple industries. Second, they wanted to recruit and support vertical e-marketplaces to serve specific industries. Third, they wanted to provide procurement solutions; both licensed and hosted, to potential e-marketplace buyers. And fourth, they wanted to become the market leader in Portugal, Brazil and Argentina.

Portugal Telecom selected Commerce One based on the comprehensive and global scope of the company's solutions.

"Commerce One was the only total solutions provider," stated Horta Costa. "The Commerce One MarketSite™ Operating Environment had the scalability and open architecture we required, and we were very impressed with their vision for the Global Trading Web."

After establishing their horizontal e-marketplace, Tradecom.pt looked to rapidly expand their buying community by leveraging the existing customer base of Portugal Telecom. The company then augmented the community with a program designed to attract suppliers that provided products and services across multiple industries.

"Tradecom currently offers its buyers a wide range of suppliers including office and computer supplies, employee recruitment services, travel, financial services, car rental, catering, marketing and advertising agencies, and event planning," said Horta Costa.

cedures and IT infrastructure.

Perhaps the biggest hurdle companies have to overcome revolves around a shift in focus. IT solutions have traditionally looked inward, implementing applications such as ERP and supply chain planning systems to become more efficient and refine business

processes. But the new, e-marketplace approach allows companies to look beyond the enterprise and out into the marketplace with all its complexity, including widely varying corporate cultures, business processes and a wild hodgepodge of networking and IT environments. But despite these prob-

lems, what they are also seeing is the enormous potential driven by the most powerful set of changes to ever impact business.

The E-Marketplace Company

It is the long-term potential of Internet-enabled e-business that drives Commerce One, which has taken a leadership role in creating global e-commerce solutions for its customers.

Commerce One is the e-market-

place company. Through its software, services and Global Trading Web of interconnected e-businesses, Commerce One enables worldwide commerce on the Internet. Customers create highly efficient e-marketplaces composed of transparent commerce communities of trading partners. This interaction dramatically improves profitability for all the participants.

"What you're seeing," says Hoffman, "are the very beginnings of

the marketplace of the future. At Commerce One we're involved in helping to create a global network of Internet-enabled marketplaces where all businesses, no matter what their size, can trade with each other, anytime, anywhere. In 1999, with the launch of the Global Trading Web™, we laid the foundation for this vision. The response has been phenomenal."

The reason for the enthusiastic



CAP GEMINI
ERNST & YOUNG

Enporion turns to CGE&Y for e-marketplace expertise

"Starting any company is never an easy task. But bringing together seven energy companies to form an electronic marketplace presents a level of complexity few business professionals have ever experienced. Credit for the success in getting Enporion deployed as well as the speed with which we brought the exchange to life is shared by the representatives from each of our participating utilities, the MarketSet™ solution platform jointly developed by SAPMarkets and Commerce One and the expertise and guidance we came to depend on from Cap Gemini Ernst & Young," maintains Enporion CIO Michael Johnson.

A new marketplace serving the electric and gas industries, Enporion brings buyers and suppliers together to conduct secure transactions, share knowledge and collaborate to achieve excellence throughout the supply chain. And, says Johnson, one of the first—and most important—action items his company completed during Enporion's start-up phase was the hiring of Cap Gemini Ernst & Young (CGE&Y) as its business strategist.

"Enporion was new territory for every member of the team," says Johnson. "We had the industry experience. What we needed was a business partner who could bring the intellectual capital necessary for successfully creating a collaborative global online marketplace."

Collaboration is key

Interestingly, collaboration was not only the goal of the Enporion exchange; it was also a pre-requisite in the selection of a business partner.

"We were looking for a business partner who would be as

committed to our success as we were and we wanted to participate in the process," he explains. "Many consultants want you to simply hand over the control. We wanted to work with an organization whose business model allowed for—even encouraged—team collaboration. We found exactly what we were looking for with CGE&Y."

CGE&Y offers a comprehensive suite of services designed to enable companies to quickly move to and capitalize on the efficiencies of Internet-based, electronic marketplaces. According to Johnson, CGE&Y can help with developing a B2B e-marketplace launch strategy, conducting e-readiness assessments and exchange design—whatever is needed to enable new levels of operational excellence at every point within the supply chain.

As Enporion's primary business partner, CGE&Y helped formulate strategy and, says Johnson, "kept us moving forward. CGE&Y was involved in everything from developing marketing models to evaluating potential sites for our corporate headquarters."

In addition, CGE&Y co-chaired the technology team. Although the actual selection of the technology was left to Enporion's technical team members, CGE&Y played a "significant role" helping the group develop criteria and evaluate individual offerings. CGE&Y was also chosen as the primary contractor for deploying the SAPMarkets/Commerce One solution.

In just eight months, Enporion has journeyed from an idea to one of the preferred electronic auction houses, featuring multi-variable bidding, RFP posting and a whole lot more.

"CGE&Y really distinguished themselves in this effort," says Johnson. "Their methodology was key to achieving the speed to market we felt was essential to Enporion's future."

adoption of the e-marketplace concept is that it not only solves core procurement and supply chain problems, but it also creates a whole new set of opportunities that allows these businesses to forge a far closer relationship with their customers.

For example, companies such as Eastman Chemical Company, Idaho Power, Schlumberger Oilfield Services, and Siemens Procurement and Logistics have all implemented the Commerce One e-marketplace solution. The results include significantly improved procurement cycle times, reduced purchasing costs and far greater control over the entire procurement process.

Public, Private and Access

Commerce One's Hoffman categorizes three types of e-marketplace solutions: Public, Private and E-Marketplace Access.

- A public e-marketplace supports the common e-commerce requirements of an industry or region.
- A private e-marketplace provides e-commerce capability for a single company's diverse business units and unique business processes.

In this case, the benefits derived from the e-marketplace accrue directly to the enterprise and its supply chain. As AMR Research points out, "The real power of the Private Trading Exchange (private e-marketplace) lies in streamlining and improving efficiency in existing trading relationships, including those with resellers, distributors and logistics providers."

- With the third approach, E-Marketplace Access, the beneficiaries of e-marketplace value do not even have to implement the e-marketplace themselves. Instead they

Siemens Automates Purchasing. Creates "click2procure"

Siemens has the distinction of being the largest foreign employer in the United States. The world leader in electrical engineering and electronics employees with 70,000 people at 600 locations across the country.

The company's spending for indirect goods and services is equally impressive—more than \$1 billion annually.

Siemens Procurement and Logistics Services (SPLS) division in North America offers a range of purchasing and logistics services to Siemens' operating companies and third-party customers. Included are global sourcing, electronic procurement and excess inventory services.

In 1999, SPLS selected Commerce One to provide an automated purchasing solution. Pete Ochel, vice president of Procurement for SPLS commented "Our team selected Commerce One because we found it provides the leading technology in the e-commerce space with its Enterprise Buyer solution as well as access to other virtual marketplaces."

SPLS created "click2procure" using the Commerce One technology and began negotiating with its suppliers for new contracts. The SPLS strategy was to bring together all of its operating companies, select preferred suppliers and negotiate the best prices for everything from services to equipment.

A pilot project was launched in February 2000 with two internal customers for click2procure—Siemens Corporation and Siemens Shared Services. Shortly thereafter seven Siemens organizations began to use the system with more than 1500 end users conducting live transactions. Today that number has grown to over 30,000.

Using the Commerce One solution, SPLS has reduced the cost of creating a purchase order by approximately 75 percent. According to Ochel, "We have both short- and long-term goals for aggregating Siemens' indirect spend over click2procure. The short-term goal is to bring all major Siemens operating companies on to click2procure in 2001. At this point we expect to capture 50 percent of Siemens' indirect spend on the system. The long term goal is to raise that number to about 80 percent, and then offer the solution to third party customers."

implement applications sometimes known as "on-ramps" to streamline internal procurement and participate in existing e-marketplaces, public or private, as a buyer, supplier, or service provider.

Hoffman is quick to point out, however, that these three e-marketplace solutions are only the first part of the B2B value proposition. As

beneficial as each solution is individually, the benefits multiply when the solutions are connected to each other. This is the power of the Global Trading Web, the world's largest open, B2B Internet-based trading community. With its many participating e-marketplaces and "on-ramps," the Global Trading Web allows its members to do busi-



Compaq and Commerce One: strategic alliance for B2B e-commerce

Analysts predict that products and services sold through B2B e-commerce will generate more than \$7 trillion worldwide by 2004, with e-marketplaces driving nearly 40 percent, or \$2.7 trillion, of these transactions.

The goal of the Compaq-Commerce One alliance is to drive global adoption and use of B2B commerce solutions through joint solutions that simplify access and reduce the overall price of entry.

As more and more businesses participate in e-marketplaces and liquidity is increased, participants are expected to reap the benefits of significantly reduced costs and expanded reach to incremental buyers and sellers, as well as facilitated sourcing and the ability to reduce inventory through spot buying or auctions. Compaq and Commerce One collaborate on optimizing the performance and deployment of e-marketplace solutions including buyer and supplier on-ramps and forward and reverse auction service on state-of-the-art Compaq ProLiant™ industry-standard servers.

Compaq and Commerce One also collaborate to optimize and promote the Microsoft Windows NT and Windows 2000 Server operating systems as Commerce One's lead platform, and to develop and sell e-marketplace solutions based on the Windows platforms.

Compaq Global Services, with 40,000 experienced service professionals, is already a key provider of systems integration services to Commerce One customers and is expected to play an expanded role in delivering planning and implementation services to customers worldwide. Together, the two companies offer customers unequalled performance, optimized reliability, scalability and availability in their e-business deployments.

Expanding successful collaboration

In recent months, the Compaq-Commerce One relationship has resulted in some of the industry's most reliable, available and scalable e-procurement and e-marketplace solutions available today.

Commerce One powers the Compaq Global Business Exchange, a major Compaq e-commerce initiative that enables large commercial customers to buy directly from Compaq and other suppliers through the Compaq-hosted Commerce One solution. Compaq plans to extend this capability to hundreds of its channel partners in the near future.

Compaq is the preferred platform provider for Commerce One with more than 2/3 of Commerce One e-marketplaces using Compaq servers. Customers such as British Telecommunications, Exostar and Com2B chose Commerce One solutions on Compaq platforms because of the close collaboration between the two companies. Additionally, Compaq powers Commerce One.net and provides the hardware infrastructure for a growing number of Commerce One-hosted e-procurement and Net market maker customers.

ness through a single connection, with any supplier on another e-marketplace, anywhere in the world. The result of this "e-commerce network effect" is better market intelligence, tighter collaboration, better business decisions, lower transition costs, and optimal pricing for all participants.

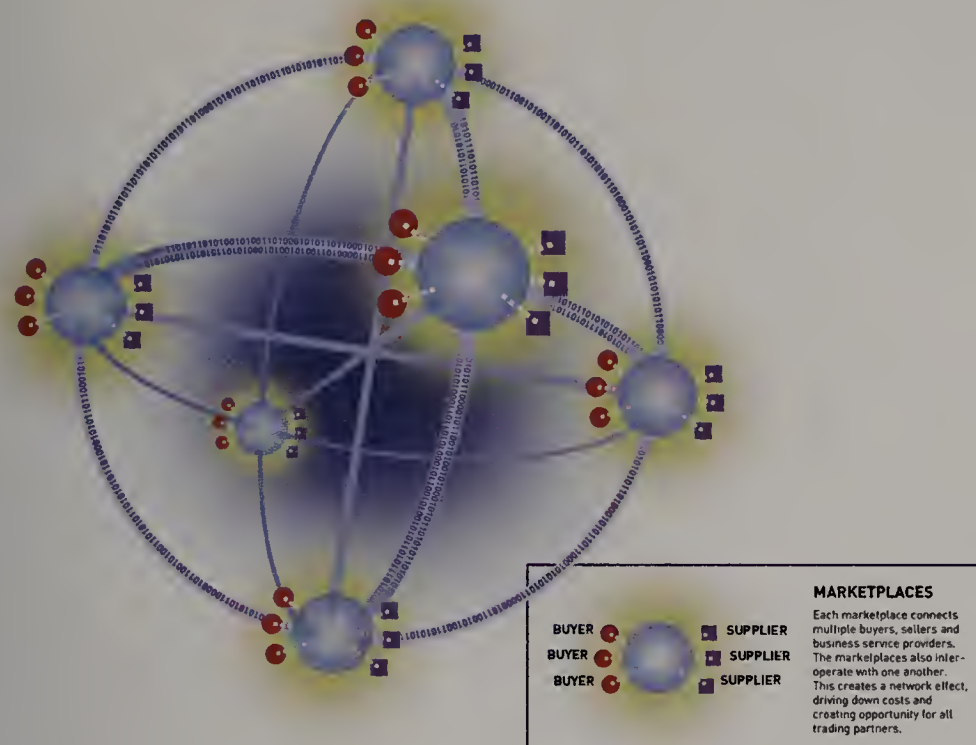
Reasons to Jump In

Whether it's a public, private or an initial commitment to an e-marketplace, there are a lot of reasons why companies will want to become involved.

When buyers and sellers are linked into a global trading community, such as the Global Trading Web, they have far greater opportunities for mutual e-commerce. Through a single connection accessed by a Web browser, additional customers and markets become instantly available. Buyers find supplementary sources for new and existing products, some of which may not have been available in their regional or vertical e-marketplaces. They can leverage services that increase flexibility—for example, enabling auctions for buying or selling goods. More potential sales channels are opened up to suppliers and supplier costs for receiving and fulfilling are reduced. And, because this type of relationship is all about communications, both buyers and sellers have a foundation upon which to create new trading relationships, explore new markets and launch new products.

These kinds of marketplaces tend to generate their own momentum. By providing access to new services, sources and markets, greater value is delivered to the trading community. This increased

GLOBAL TRADING WEB



The Global Trading Web is the world's largest open B2B Internet-based trading community. Each marketplace connects multiple buyers, sellers and business service providers. The marketplaces also interoperate with one another. This creates a network effect, driving down costs and creating opportunity for all trading partners.

value, in turn, motivates the existing partners to increase their trading activities. At the same time, new partners rush to join the e-marketplace to get in on the action.

A Matter of Money

Of course, at the simplest level, an e-marketplace, whether public or private, is attractive simply because it promises to save significant amounts of money. For example, Eastman Chemical, Kingsport, Tenn., began using Commerce One Enterprise Buyer Desktop Edition™ (formerly known as BuySite™, Commerce One's on-line e-procurement solution) in January 1999 to purchase base supplies such as hydrochloric acid. The return was immediate and dramatic—Eastman slashed the cost

of an average purchase order from \$115 to less than \$30. And this is just the tip of the iceberg.

AMR Research estimates that, based on a 29 percent adoption of B2B e-commerce, cost reductions of indirect procurement will exceed \$82 billion by 2004. And, if just a four percent reduction is realized in direct procurement costs, this number balloons to \$229 billion.

Because the e-marketplace is linked to a global network, connecting B2B buyers and sellers around the world, the benefits of this new approach go far beyond e-procurement. These e-marketplaces take full advantage of what is known as the network effect. Computer industry guru Bob Metcalfe once pointed out that the more devices are hooked up

to a network, the more valuable that network becomes. A stand-alone fax machine is useless; the impact of millions of fax machines that can now communicate with one another over today's global networks is priceless.

In the New Economy, as the number of linked buyers and sellers increases, the value to each of the participants increases. A new Web of relationships is formed, a sort of business ecosystem. Buyers find they have access to more sources of materials and components at better prices along with faster and more flexible delivery schedules. For the sellers, the ecosystem provides them with more markets, more customers and the ability, if they choose, to think in global terms. But perhaps even more important, for both buyer and seller, being part of the ecosystem provides the potential to discover innovative solutions that would not have been possible in the past.

Global Trading Web

One of today's hottest examples of how this ecosystem approach to e-commerce is paying off is the Global Trading Web. The Global Trading Web brings together world-class market makers in order to form the world's largest B2B trading community. Founded by Commerce One in 1999, today the Global Trading Web includes over 140 e-marketplaces in a diverse range of industries and world regions. Beginning with Commerce One.net™, an open e-marketplace that provides global e-commerce services to buyers, suppliers and Net market makers, the Global Trading Web quickly expanded on a global basis. The next step was a major licensing agreement with British Telecom to

A still life photograph featuring a large, ornate silver bowl filled with a bunch of green grapes. The bowl sits on a highly reflective, dark surface. A single green grape has rolled away from the bowl and is positioned in the lower-left foreground. A thin white line connects the text 'e-marketplace' to this isolated grape. The background is a solid, deep blue, and the lighting creates soft highlights on the grapes and the bowl's rim.

e-marketplace



Global Trading Web

IF A SINGLE E-MARKETPLACE
IS GOOD FOR BUSINESS, SEVERAL
HUNDRED ARE EVEN BETTER.

That's the basic idea behind the Global Trading Web™, an open network of astronomical proportions that links e-marketplaces from every industry and platform together into one. This was our vision from the beginning. After all, if e-marketplaces exist to let buyers and sellers collaborate and conduct high-volume transactions, why not let e-marketplaces collaborate too? And crank the volume to the max. To find out more about the Global Trading Web, visit commerceone.com/emarketplace4 or call 877-261-8516.

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establish a global trading e-marketplace for the U.K.

BT initiated its e-marketplace by purchasing Commerce One Enterprise Buyer e-procurement solution to streamline its internal purchasing procedures. When the cost of purchase orders dropped from an average of \$113 to \$8, BT counted themselves among the converted. Next BT purchased the

Commerce One MarketSite Operating Environment™ and created a new public e-marketplace, BT MarketSite, which its corporate customers use to purchase their own supplies on-line. The BT MarketSite generates revenues for BT in the form of transaction charges, banner advertising revenue and other fees. Commerce One receives a percentage of the site's revenues as well.

It wasn't long before other companies followed suit—establishing regional e-marketplaces around the world and becoming Global Trading Web members. Jumping on the bandwagon were NTT Communications in Japan, SESAMi.com in Southeast Asia, Australia's Cable & Wireless Optus, Banacci in Latin America, the TD Bank Financial Group in



Commerce One and Intel® solutions for e-marketplaces

In 2000, Commerce One and Intel entered into an alliance to deliver highly scalable e-commerce solutions through tight integration and optimization of Intel's technologies and Commerce One's e-commerce solutions, including solutions based on the Intel Itanium™ processor.

"Intel architecture currently powers the Global Trading Web partner e-marketplaces, so it was a natural step to work with Commerce One to continue to build best of class e-commerce solutions," notes Sean Maloney, executive vice president, director Sales and Marketing Group for Intel.

The Commerce One and Intel alliance brings together resources that will allow customers to take full advantage of e-commerce efficiencies enabled by Intel-based servers such as security, scalability, and reliability, as well as a low total cost of ownership.

"E-marketplaces have to scale to handle the billions of dollars in transactions that leading companies want to move onto the Internet. Our work with Intel and other industry leaders such as Microsoft, Compaq and Hewlett-Packard is key to supporting the tremendous volume of transactions that will come across these e-marketplaces," adds Chuck Donchess, chief strategy officer for Commerce One. "Our work with Intel further demonstrates our commitment to deliver open, scalable e-commerce solutions that allow businesses to trade with anyone, anytime, anywhere in the world."

Commerce One's customers and partners will be able to easily scale and grow their marketplaces on Intel architecture as they continue to increase transaction volume.

Commerce One.net powered by Intel-based servers

Commerce One.net, a Commerce One hosted e-marketplace

for business-to-business e-commerce, is at the heart of the e-marketplace revolution that some experts predict will represent 56 percent of all business-to-business (B2B) transactions. Thousands of buyers and suppliers conduct mission critical business over Commerce One.net's servers everyday. They collaborate with each other, trade and source new products and services.

The Commerce One.net e-marketplace is an excellent illustration of how the Commerce One-Intel solution meets mission critical requirements for reliability, scalability and availability. Not only can an e-business run its own operations on Intel-based servers, it can, as in the case of Commerce One.net, run other companies' e-business as well.

Today 140 Intel® based servers power Commerce One.net, providing an open platform on which to build the Commerce One.net e-marketplace.

"The competitive advantage that we gain from operating on an open standard is massive," reports Roy Satterthwaite, vice president of Commerce One.net. "Commerce One.net can plug into multiple systems, translating into the fastest time to market for our customers. If they have multiple systems today, they can integrate them into their environment. They don't have to pull out those systems and put in something else that will work with the exchange. The fact these systems can all run on Intel is key."

Commerce One.net is only one example of how the Commerce One-Intel solution can meet your business needs. To learn more about Commerce One and Intel solutions visit www.intel.com/eBusiness.

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Canada, Germany's Deutsche Telekom and Swisscom AG, Switzerland. Notes Mark Nittler, Commerce One vice president, Strategic Marketing, the Global Trading Web has taken on a life of its own.

A Web of Relationships

Participants in the Global Trading Web are not only enjoying significant savings in their trading efforts—this approach provides many other benefits as well. They are able to leverage the existing infrastructure of the trading community because each e-marketplace potentially has access to the trading partners, products, sources and services of other e-marketplaces within the network.

These ad hoc partnerships, which can form and reform organically within the Global Trading Web's ecosystem, allows the participants to share economic advantages as well as eliminate redundant development efforts, speed time to market and realize an increased return on investment.

By using the capabilities of the Global Trading Web, individual e-marketplaces become more efficient by aggregating demand, managing supply chains, developing trust models, and exchanging business documents. Reliance on cumbersome fax and telephone based-systems is rapidly becoming just a memory. Instead companies are wholeheartedly adopting the Internet-based on-line model, complete with Web interface, in order to streamline and speed business processes.

Another benefit of the network effect is the economies of scale

Compaq Used Procurement Application To Open New Global Sales Channel

Compaq Computer Corporation, the \$38.5 billion dollar computer company headquartered in Houston, Texas, is using the Enterprise Buyer e-procurement solution to boost its sales to its key customers.

The company is offering the procurement application to its global customers that spend a minimum of \$5 million a year on Compaq equipment and services.

These preferred customers realize several benefits—not only is their computer procurement process streamlined but they can use the application to buy from any vendor whose products are essential to their daily business operations.

Said Curtis Hutcheson, director of E-procurement and Strategic Planning for Worldwide E-commerce at Compaq, "By leveraging the Commerce One e-procurement tool, we are improving the way our customers can buy computers, enabling not only a new method to buy from Compaq, but from other suppliers as well."

By hosting Enterprise Buyer, Compaq enables its customers to avoid lengthy, expensive implementations. "Customers do not want to endure a six-month deployment waiting period," said Hutcheson. And why should they when Compaq global services can enable online purchasing within two to four weeks?

By the end of 2000, nearly 500 registered customers were on the system with others in various stages of implementation. The company leverages Enterprise Buyer to transact with customers in multiple European and Latin American countries.

"We are excited about having gone live in several geographies so early in the project, because our international business is very important to us," Hutcheson said.

possible with a global trading community. By participating in the Global Trading Web, each trading partner enjoys substantially more business opportunities with little or no additional investment. Profit margins on each transaction increase and time to market speeds up. As the Web grows, competitors find it increasingly difficult to overcome the financial and networking critical mass that has been built up by the linked e-marketplace partners.

Even though the Global Trading Web is a worldwide phenomena, because it connects to regional sites, e-marketplaces anywhere in the

world are able to deliver localized content. Local markets can be addressed in their native language with full regard for local culture, laws and business practices.

Each member of the Global Trading Web, working with the solution's flexible, open architecture, can set its own pricing and economic model, as well as offer unique business services to its constituents. At the same time, each e-marketplace contributes tools, insights and innovations that benefit the entire Global Trading Web community.

The Global Trading Web is rapidly evolving into a large, open community, independent of any one

Microsoft®

Business leaders choose Microsoft-based Commerce One solutions for B2B needs

Today, Microsoft and Commerce One are working together to create the second wave of e-business. The companies share a strategic vision, a global alliance and a proven track record of technical collaboration and customer successes among Fortune 500 clients and new e-businesses alike—empowering the largest of global e-marketplaces.

As a result of the long-standing relationship between the two companies, Commerce One is developing a next-generation e-marketplace infrastructure optimized for transaction scalability and ease of administration. Built on Microsoft .NET Enterprise Servers, this newly designed infrastructure will greatly enhance the scalability, reliability, agility and price performance of enterprise B2B solutions.

The combination of Commerce One's global industry expertise and e-marketplace solutions with the business agility of the Microsoft .NET platform will provide customers with increased speed to market, seamless product integration and new business opportunities.

Microsoft Windows® 2000 Server, Microsoft SQL Server 2000, Microsoft BizTalk Server and Microsoft Commerce Server provide enterprise and mid-size customers faster time to market, scalability and reliability—allowing them to transform the way they interact with customers and partners, to get a quicker return on investment and to maintain business agility in a rapidly changing marketplace.

Global Trading Web deployed on Microsoft platform

Enterprise customers of all sizes are realizing this business agility through solutions from Commerce One and Microsoft. In fact, the world's largest B2B trading community, the Global Trading Web, is deployed on the Microsoft Windows platform.

Commerce One and Microsoft are also collaborating in Microsoft's E-Business Acceleration initiative. This initiative is an integrated, B2B strategy that makes it easy for companies of any size to use the Internet to transact business through multiple sales channels whether it's e-marketplaces, e-procurement systems or directly with customers.

The combination of Microsoft and Commerce One can help you gain business agility and lower cost of ownership.

vendor's hardware, software or networking solutions.

The Covisint Project

One of the foremost examples of a global B2B exchange is Covisint, the huge automotive e-business trading exchange supported by DaimlerChrysler, Ford, General Motors and Renault/Nissan.

Covisint is a major undertaking. Organized on December 8, 2000, the organization, which is temporarily headquartered in Southfield, Michigan with offices in Europe and the Asia-Pacific region, has a clear vision for its participants and the automotive industry as a whole.

Addressing its members and trading partners on the Covisint Web site

(www.covisint.com), the organization notes that "E-business is not about incremental improvement; e-business will fundamentally redesign your enterprise. Web sites that offer incremental solutions to isolated aspects of your company do not enable you to reap the true benefits of e-business. Covisint will address your entire business, link you to the entire industry, and provide the energy to accelerate your operations to the lightning speed of the Internet."

Covisint will support the following automotive industry goals:

- 12–18 month vehicle development cycle
- Compressed order-to-delivery cycles (one of the current El Dorados of the automotive industry is the five-day car—five days from customer order to delivery to the customer's front door or dealer)
- Increased shareholder valuations within the automotive industry
- Greater asset efficiency and utilization
- Higher profitability with direct impact to the bottom line
- More integrated supply chain planning
- Reduced business process variability

Commerce One is providing many of the core B2B capabilities for Covisint. For example, the automotive e-marketplace is using Commerce One MarketSite, the company's e-marketplace operating environment, as the transaction engine for trading all kinds of goods and services, including indirect and direct materials. Covisint is hosting the Enterprise Buyer e-procurement solution for use by participants in the e-marketplace. And, Covisint is putting into play the Commerce One auction

and catalog content solutions as well as relying on Commerce One Global Services to provide strategic and technical consulting resources.

Covisint is a good example of how one of an e-marketplace's members can benefit the entire trading community. In this case, General Motors, looking for a way to drive inefficiencies out of its purchasing process, turned to Commerce One to help develop GM TradeXchange. With the emergence of Covisint, the operations and functionality of GM TradeXchange has been absorbed into the Covisint global B2B exchange. (For more on TradeXchange, see the sidebar on this page.)

Some of the other mega-e-marketplaces that Commerce One is helping to create show the magnitude and momentum of this trend. For example, Exostar brings together buying members BAE Systems, Boeing, Lockheed Martin and Raytheon. These four founding members have a combined annual procurement outlay of \$71 billion and currently do business with 37,000 suppliers.

Trade-Ranger includes 14 oil and gas companies, including such industry leaders as BP Amoco, Dow Chemical, Occidental Petroleum, Phillips Petroleum, Royal Dutch/Shell and Unocal. Annual procurement spending by the 14 members tops \$125 billion.

Due to the participation of major companies from nearly every industrial sector, multi-billions of dollars in transactions are already flowing through the Global Trading Web, bringing efficiencies and cost savings to companies around the world.

TradeXchange at GM Reduces Spending, Generates New Revenues

General Motors is at the top of the heap—number one on the Fortune 500 and the world's leading manufacturer of cars and trucks. Brands include Buick, Chevrolet, GMC, Cadillac, Pontiac and Saturn. Revenues for 1999 were more than \$176 billion. With 600,000 employees in 127 countries, GM spends about \$86 billion each year through more than 30,000 global suppliers. GM indirect spending—money not spent directly on the parts and labor for a finished vehicle—accounts for \$10 billion.

In December 1999, after consolidating its purchasing operations, GM partnered with Commerce One to create GM TradeXchange. Ray Pollard, director of Global Strategic Alliances for the exchange noted that "We evaluated comparable solutions from other companies, but Commerce One was the only one able to provide a true, global marketplace strategy that complemented its market leading technology."

Key missions of the new exchange include reducing the cost of producing purchase orders, increasing the company's return on used machinery by leveraging Commerce One Auction Services, and hosting an e-commerce platform for other buyers and sellers within the automotive industry to realize similar savings through improved supply chain management.

GM worked with Commerce One to create GM TradeXchange using the Commerce One MarketSite Operating Environment, and with PricewaterhouseCoopers to implement the Enterprise Buyer e-procurement solution within its internal purchasing department.

Rather than selling used machines to a scrap dealer for a fraction of their original purchase price, GM TradeXchange support of Commerce One Auction Services allows GM to realize significant revenues. For example, equipment that might have brought between \$0 to \$80,000 from a scrap dealer, often generate bids for between \$200,000 and \$300,000 in an auction. GM also uses the marketplace's capabilities to conduct reverse auctions in order to solicit the best value for direct goods—raw materials or components used to produce finished products.

Currently GM generates more than 3,000 purchase orders per month. Since December, 1999, the company has routed \$28 million in indirect spending through TradeXchange and realized approximately \$4.5 million in revenues through Commerce One Auction Services.

According to James Lykins, director of sales and marketing for GM TradeXchange, GM has saved millions of dollars through reverse auctions. "This is great," he said, "but even better is the amount of time we will ultimately be saving. The automation we have already achieved was impossible in the past. The liberation from manual processes has added incredible value throughout our organization, and we are now planning to build cars in days rather than weeks or months."

GM TradeXchange is part of the Global Trading Web. GM is able to share the benefits of participating in the exchange, including the knowledge and experience it has gained, with all the members of the global trading community.

Public and Private E-Marketplaces

The same engines and concepts that drive public e-marketplaces power the fast growing world of private e-marketplaces. Many companies are now creating these private e-marketplaces to realize the same benefits afforded by the public e-marketplaces for operations that are best handled between "insider" groups of trading partners.

Nittler points out that this approach is appropriate when, "a company has a unique supply chain that lends itself to a private e-marketplace. For example, a soft drink manufacturer may have created a highly integrated vertical supply chain that extends from the cane fields all the way to the factory. This unique business process is probably not available through a public e-marketplace.

"But this is not an either/or situation," he continues. "It's unrealistic to assume that the business world will be characterized by purely private or public e-marketplaces. Instead we are beginning to see the emergence of a blended model in which an enterprise will employ private e-marketplaces for vertically integrated supply chains and situations where security or proprietary processes are an issue, and use their membership in a public e-marketplace for e-procurement, global supply chains, auctions and other activities that benefit from a public approach."

E-Marketplaces and the Enterprise

According to Nittler, whether an enterprise chooses to become part of a public or private e-market-

place, combine the two approaches, or take the on-ramp route to become more familiar with this new business model, a fundamental shift in assumptions about implementing the technology takes place.

"In the pre-Internet IT model, software applications were focused on the operations of the individual enterprise—it was an inward-looking approach, concerned about what was happening within the confines of the organization," he says. "IT technology was primarily focused on calculation—capturing and summarizing transactions and creating reports. The technological infrastructure reflected these concerns in the form of mainframe-based, centralized computing or, more recently, client/server architectures. This approach provides valuable insights into internal business processes and, when linked together, these processes create a single data model for the organization."

"But now the Internet has changed everything," Nittler continues. "In addition to dealing with internal systems, the Internet allows the organization to shift its focus outward to its trading partners, suppliers and customers. The primary role of information technology is to provide communications with a far wider and diverse community. And, of course, this shift makes possible B2B e-marketplaces, both public and private.

"From the CIO's point of view, one of the biggest challenges in moving to this new business model is the changed relationship with the external world," he adds. "In the older inward-looking enterprise systems, IT had firm control over standards, hardware, software and the

networking infrastructure. But in a marketplace model, it is no longer possible for the IT organization to dictate standards and protocols—suppliers, trading partners and everyone else involved in the e-marketplace bring a very heterogeneous environment to the table. Openness and interoperability become essential. New connectivity strategies, such as using hubs to connect one to many—the same approach taken by IP multicasting—becomes a preferred solution to routing communications between e-marketplace participants. What's at stake is the ability to aggregate people, enterprises, buying power and information in order to realize all the benefits that the e-marketplace model makes possible."

XML Under the Hood

Nittler notes that the Global Trading Web is a good example of a trading community that is enjoying organic growth—a changing and constantly expanding trading ecosystem. This is possible because the underlying technology is based on an open architecture and widely disseminated industry standards. While providing the security and controls that make global transactions possible, this open approach makes it possible for Web members—no matter what IT systems they are using internally—to communicate with one another.

A key technology enabler for the e-marketplace is XML, a platform for information exchange between computers. Several industry initiatives are under way to develop universal XML standards to accelerate the adoption of XML-based B2B e-commerce. Commerce One has

eScout teams with PricewaterhouseCoopers to extend B2B model

From Many, OneSM is the force behind eScout, a Web-based e-commerce and e-business network for businesses looking to reduce costs, manage business processes and execute transactions via the Internet. By creating a community in which all members support and empower each other for sustained growth, eScout has brought business-to-business e-commerce to a new dimension: the collection of a disparate membership base that enjoys an online environment where members confidently transact business with each other.

"Our mission is to empower members through a group of online services so they can buy, sell, learn and grow," commented eScout CEO, Sandy Kemper. "In economic ecosystems, the real power is the collaboration across the network. As eScout guides more and more independent businesses and introduces them to other businesses, we create new opportunities and economies of scale typically reserved for only the largest of companies. In the Industrial Age, scale was created through physical acquisition. In the Information Age, scale can be created through virtual aggregation."

PricewaterhouseCoopers is working with eScout to extend this B2B model. The companies have teamed to develop a supplier integration strategy and value proposition and to refine day-to-day operations for enhancing IT performance in project management, product development and technical architecture. Together, they have developed marketing services such as promotional programs and incentive plans for buyer attraction and retention. PricewaterhouseCoopers project partner Brian Mitchell describes eScout as having, "The dynamic atmosphere and forward-thinking management team to achieve the agility needed to be successful in the B2B environment."

Online environment based on trust

To help companies use the Internet for broader business opportunities, eScout provides a variety of e-business solutions organized into three core business areas. These include: eScout MarketPlaceSM, its premier MRO e-commerce hub; eScout SolutionsSM, where companies access logistical, human resource, and various office productivity applications; and eScout InsightSM, a rich collection of information sources tailored by industry and geography. A world-class customer service group, legendary in their responsiveness and knowledge, supports all of these areas.

Unlike solutions defined solely by technological functionality, eScout differentiates itself by creating an online environment that not only offers best-of-breed technology, but also is based upon the foundation of commerce itself: trust. This trusted environment is a direct result of the secure relationships eScout-partnered companies have already forged with their commercial customers. The growing eScout member network now represents more than 9,000 companies and more than 25,000 buyers. They choose from a growing selection of more than 75 suppliers who collectively offer millions of products in virtual inventory. Since its inception, eScout has electronically generated tens of thousands of invoices, hundreds of thousands of transactions and millions of dollars in sales.

eScout also is a founding member of the Global Trading Web, the world's largest online trading community. The eScout MarketPlace, by virtue of averaging thousands of transactions per week, is one of the most active transacting members of the Global Trading Web.

partnered with industry leaders such as Sun, Microsoft and Compaq to lead the way with the XML Common Business Library, or xCBLTM, a set of XML building blocks and document framework that allows the creation of robust, reusable XML documents to facilitate global trading.

In addition, this open architectural approach makes both public e-marketplaces and private e-marketplaces interoperable with leading

procurement, sales and ERP applications. Technical interoperability assures that files, data and applications can be transferred across the platform to every user. Business services, such as payment or logistics functions, can be syndicated across multiple e-marketplaces.

Future of E-Commerce

"What made the e-marketplace concept attractive at the very beginning was saving costs," says

Commerce One CEO Hoffman. "This is still a major motivator, but now that companies are beginning to see the full potential of e-marketplaces, the top priority has changed. Now the reason enterprises are building market sites and participating in B2B e-marketplaces is to create a competitive advantage and to get closer to their customers."

"As a result, we're seeing a movement toward exchanging more com-



With MarketSet, IBX can build locally, trade globally

“We had two major reasons for choosing the MarketSet solution,” explains Mats Oretorp, marketing director for IBX Integrated

Business Exchange, “the overall maturity of the application platform and the business model it supports.”

Founded in 2000 by SEB, Ericsson and b-business partners, the Integrated Business Exchange (IBX) is already one of the most powerful independently owned, open B2B exchanges in northern Europe. By linking together buyers and sellers of goods and services across all industries and countries in the Nordic region, IBX facilitates efficient transactions, allowing customers to easily transact and collaborate with one another regionally and on a global scale through the Global Trading Web.

“Commerce One and SAPMarkets have an excellent track record selling into volume marketplaces and, in our eyes, they are delivering the most fully developed, mature, standard application for e-commerce today,” says Oretorp. “But just as important is their joint support for a business model which allows global presence to be built up by local hubs connected together in the Global Trading Web. Other vendors have only centralized models, where everything is basically connected to a US hub. For a region like ours, that model simply will not work. You must build locally. You need to understand the currencies, the VAT rules, the local market dynamics—this is what the Global Trading Web is all about. Many of the suppliers we hook up to are local and in order to support an international roll out we need to have an efficient network of mar-

ketplaces in different regions, where they are specialized, know the supplier’s market and can manage content.”

Value proposition for customers

According to Oretorp, SAPMarkets’ and Commerce One’s knowledge of both the internal processes that large buyers need to automate and get control over, coupled with their awareness of the challenges presented to the middleman to be able support and connect into the e-procurement system, is a value proposition for vendor and customer alike.

“SAPMarkets has a thorough understanding of the internal business processes within a corporation, whereas Commerce One is focused on e-marketplaces. By sitting down together, they have been able to develop even richer functionality than either could independently,” he adds.

Oretorp has been “very pleased” with the support he has received from SAPMarkets and Commerce One and credits the team with understanding and responding to IBX’s needs.

“This is still an evolving market,” he says. “It’s still pretty immature, the business models as well as the application platforms are changing constantly. No one can stand up and say they have all the answers today, so support from your vendor is key. Moreover, it’s almost impossible to predict exactly what kind of application functionality you’ll need eighteen months down the line. SAPMarkets and Commerce One understand this and we are confident they will be able to deliver what we need as we go forward and refine our business model.”

plex data types on the part of Commerce One partners and customers.” Hoffman concludes. “New services are being traded, more direct goods are being exchanged. There is far more collaboration between part-

ners. Internally, companies are using these e-marketplaces to help guide major reengineering changes within the organization to accommodate this outward looking, communications-based business model. Supply

chains and procurement activities are becoming more efficient and flexible. These e-marketplaces are a shining example of what can be done in an Internet-enabled world. We have an exciting future ahead of us.” •



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The Human Touch

If you've ever cursed at the complexities of a modern computer, **Michael Dertouzos** feels your pain. The director of MIT's Laboratory for Computer Science has written a new book, *The Unfinished Revolution: Human-Centered Computers & What They Can Do for Us*. It makes a passionate argument for what he calls human-centric computing—making computers serve people, not the other way around.

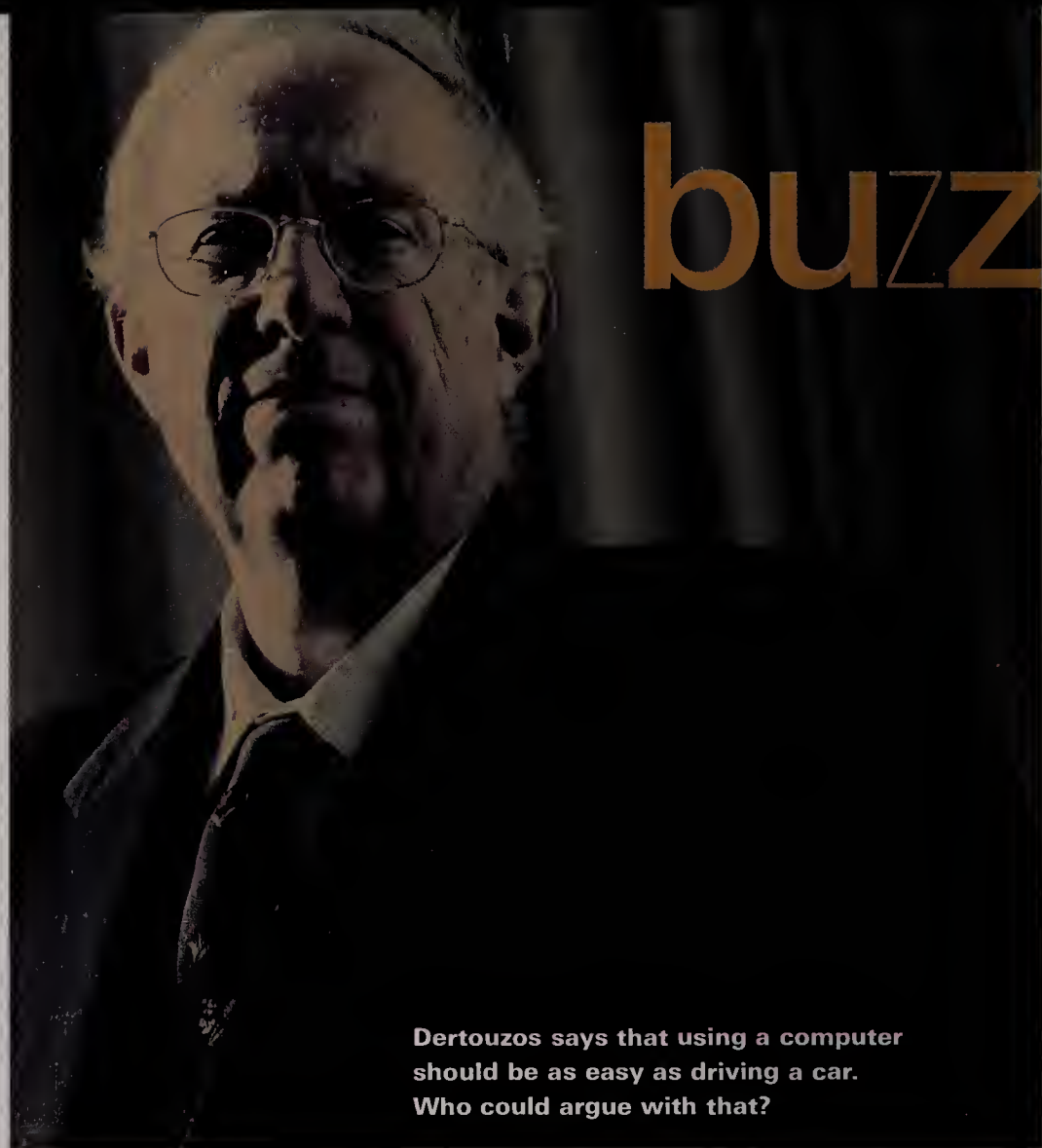
Darwin: Why aren't we further along in achieving human-centric technology? Why do our computers still crash, and why are things like listening to music on the Web still difficult for most people to do?

First of all, a certain degree of patience is warranted. It's a new field; [until recently] we haven't been that careful or cautious about making things easy.

The reason we got into this bind is human habit. When we started computing, we built operating systems that were close to the hardware. We wanted our programs to run efficiently. Those systems—Mac OS, Windows, Unix—still speak a machinelike language; for example, naming and renaming files. Things that aren't of great interest to the user. If it was a car, it would be like sitting there, controlling the fuel mixture, the spark advance, the angle of the wheels, all by yourself, using a wire to control all these functions. But you do that with computers. With cars we have steering wheel and brakes—that's what I'm calling for with computers for the 21st century.

Explain what you mean when you say we've been "passive victims" to computers and other technologies.

The biggest example for me is when we [make a phone call] and hear stupid voices saying, "If you want marketing, press 1; sales, press 2." I call this the human slavery fault. When you're on the phone, you're sitting at the end of the tentacles of a \$50 computer, obediently listening to its



Dertouzos says that using a computer should be as easy as driving a car. Who could argue with that?

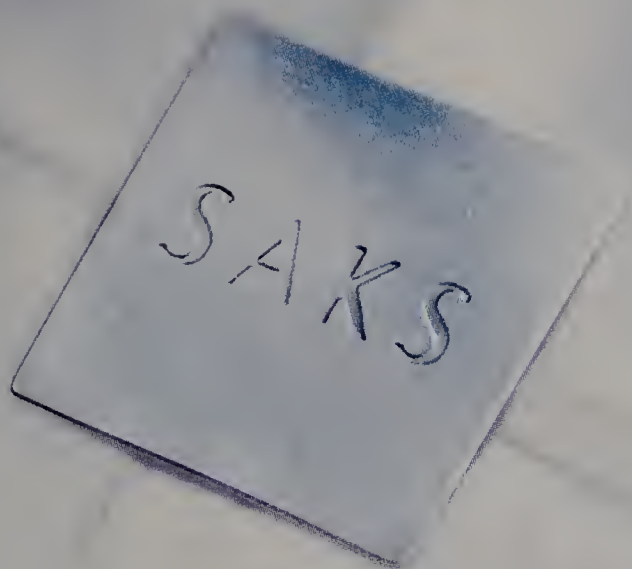
instructions. One-hundred-fifty years after the end of slavery, it's odd that we've elected these machines to become our masters. This is just terrible. We're letting these things creep up on us slowly. We should throw grenades at them.

How will businesses be affected by human-centric computing?

I think everyone will benefit from a human productivity increase, which I estimate to be 300 percent if we allow two or three decades to go by. That's about how much we gained during the second wave of the industrial revolution with electricity and motors. Here's an example: If I pick up my microphone now and call a travel agent and say, "Take us to Paris this weekend," it takes me about three seconds. The travel agent then takes five minutes to do the negotiation back and forth with the airline computers. That's 300 seconds. In the future, it will still take three seconds to give the command, but a machine will be able to do the negotiating in 300 seconds. That's automation. The ratio (3 seconds to 300 seconds) is 100 to 1. In business terms, it's a 10,000 percent productivity increase for the travel agent when the computer does the negotiating. The agent can keep answering three-second phone calls.

Make a leap from this example to other office functions: Take health care, banking, real estate, government, B2B transactions. Now people do lots of routine stuff. Think about machines doing it.

—Todd Datz



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A Help Group for Insecure Vendors

POWER ALLIANCE Technology giants such as AT&T, Cisco, Microsoft and Oracle have joined forces in the fight against cybercrime. Nineteen high-tech industry leaders have created the Information Technology, Information Sharing and Analysis Center, a Virginia-based not-for-profit corporation that will be run by Internet Security Systems. The center will serve as a forum for companies to share information among themselves and the federal government. "The organization will collect, synthesize, and disseminate informa-

tion about threats and coordinate the information technology industry's response to such threats," says **HARRIS MILLER**, head of the Information Technology Association of America. "Leading e-commerce companies have a strong common interest in increasing online security so that customers are confident about doing business on the Internet."

Since the member list unites some of the most heated rivals in the high-tech arena, questions about how effective the group will be have arisen. To assuage this tension and increase useful participation, companies have the option of anonymously submitting cases of security failures, thereby shielding any operational secrets.

—Joe Kendall



If You Don't Like TV, Don't Work Here

NEWS, WEATHER AND POWERTRAINS Most desktop-connected PC users are so accustomed to the convenience of easy access to e-mail and the corporate intranet that they may take it all for granted. Employee birthday announcements, benefits info, company news and promotions, and lunchtime requests for basketball partners all flow by throughout the day. Taken together, they help build stronger interpersonal connections and a deeper sense of corporate loyalty and belonging.

Luxury automaker BMW thought it was time to extend that type of connectivity beyond the desktop and out to the

people on the shop floor who actually build its cars. So Spartanburg, S.C.-based BMW Manufacturing sought an inexpensive way to build an internal information television network that would deliver a mix of auto industry news, production scheduling updates, local news and weather, and announcements ("Bess had a baby boy!") to the 4,000 employees who work throughout the 2.3 million-square-foot plant.

"Teamwork and camaraderie are very important here," says **Bunny Richardson**, media relations coordinator at BMW Manufacturing. "We were looking for a way to link associates together through a news and information network without having to rewire the facility or interrupt work."

The company was able to outfit the plant, which produces more than 90,000 BMW Z3, M and X5 models a year, with 100 TV monitors in central team areas and cafeterias, and run the whole system on existing copper telephone wire. The BMW Information Network was built in a week using Norwalk, Conn.-based Mphase Technologies' Transverser system, a digital video and data delivery platform that lets telephone companies simultaneously transmit high-speed Internet access, up to 400 channels of digital TV programming and traditional voice services. It also uses software from Rochester, N.Y.-based TargetVision for content aggregation and graphics. The new network went live late last summer.

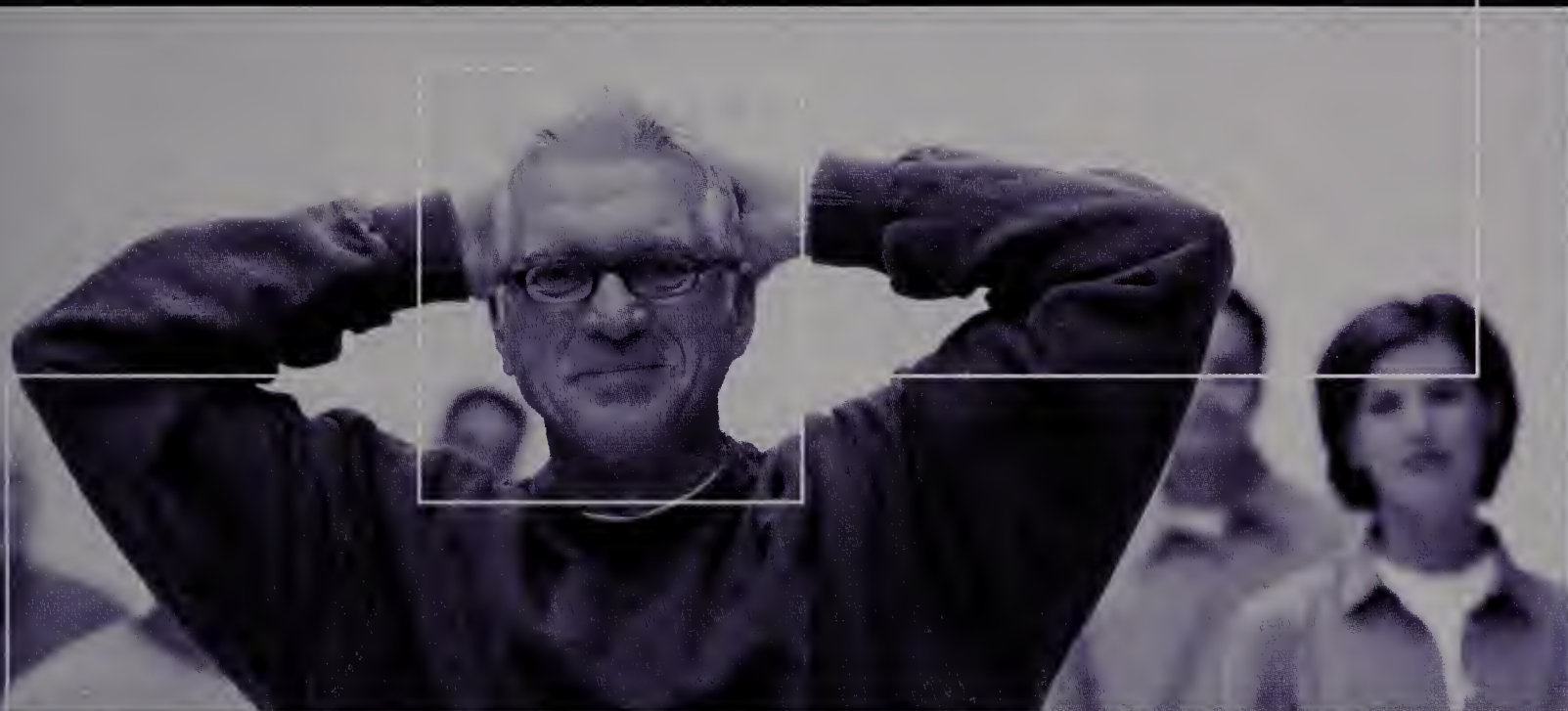
"At BMW, we're trying to keep our associates' heads engaged in their work along with their hands. And this is a way to do that," says Richardson. "The response has been great, and people outside the main plant keep asking us when they'll be hooked up. That's exactly what we want to hear."

—Stewart Deck

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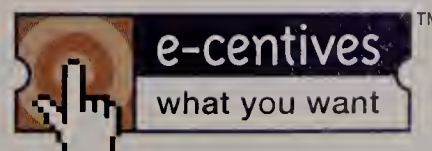
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Building a Better Padlock

PRODUCT DESIGN If the late filmmaker Stanley Kubrick had directed a home-improvement show, its set might look like the headquarters of West Newton, Mass.-based Design Continuum, a product design company. Slinky conference-room furniture coexists with sturdy lathes, band saws and exotic cutting tools. Everywhere there are examples of the company's handiwork—Reebok Pump sneakers, bicycle helmets, gas grills, a Sega Saturn joystick, titanium sunglasses, futuristic Moen faucets and assorted medical devices. And that's just for starters. "We're in every other

aisle at Home Depot," says Marketing Vice President **Edmund Milano**.

Founded in 1983, Design Continuum has about 150 employees worldwide. While happy to oblige clients who simply want a better widget, the company has leveraged product design into a broad, brisk business that encompasses packaging, branding and identity building.

Master Lock is one client that came to Design Continuum seeking straightforward design work but ended up getting much more. The Milwaukee-based company that

invented the iconic padlock in 1921 spent years watching its market share and image slide as competitors sold knockoffs for a few bucks less. When Master Lock visited Design Continuum to freshen up its products' looks, the company "was completely focused on high security and low cost," says **Roy Thompson**, who participated in the Design Continuum team that worked on the Master Lock project. "We had to challenge them on that."

The politically difficult goal was to convince the client that to consumers, "the lock itself is not that important," Thompson says. "It's what's being secured that counts."

Once the designers convinced Master Lock of this, the project mushroomed into a soul-searching exercise. Why relegate padlocks to the hardware aisle? Why not make versions with big, glove-friendly buttons and keys, and market them to sportsmen? Why not offer lots of colors, making it easier for high schoolers to find their lockers?

What began as a quest for a prettier padlock became a full-fledged branding and corporate identity revamp. This is not unusual, Milano says. "Clients have unarticulated needs. We sometimes force them to see themselves in a different way."

—Steve Ulfelder



Phones for a Cause

GREAT PROGRAM That old cell phone sitting in your desk drawer—the one that saw you through both Clinton administrations—could help save someone's life.

The Wireless Foundation, a nonprofit based in Washington, D.C., that was established by the Cellular Telecommunications and Internet Association, launched the Donate a Phone program in 1999 to help domestic violence victims. The group, in partnership with Motorola and the National Coalition Against Domestic Violence, reprograms used cell phones and gives them to shelters and police departments, which distribute them to victims who request them. The phones are programmed to dial 911 and one nonemergency number, and have free airtime, thanks to the generosity of wireless carriers such as Cingular and Verizon Wireless.

"These phones act as a lifeline to a victim who is in danger," says **Heidi Fincken**, director of programs for the Wireless Foundation. "These phones have saved lives."

Approximately 30,000 phones have been donated to victims since 1996, when Motorola jump-started the first version of the program by providing new phones to the Wireless Foundation. The foundation will take any cell phone; even if you have a clunky gadget that no longer works, the foundation will try to fix it or sell it with proceeds going to domestic violence prevention programs.

You can send your phones to the foundation through the mail (Call to Protect, c/o Motorola, 1580 E. Ellsworth Road, Ann Arbor, MI 48108). All it costs you is the postage. For more information, visit www.donateaphone.com.

—Sarah Johnson

CLARIFICATION: Due to miscommunication during the editing process, our March story "Under the Influence" contained a statement that could be interpreted as suggesting that Forrester Research analyst Bobby Cameron may have written a report deliberately to stir up controversy, for the purpose of being widely quoted and thus to enhance his livelihood. *Darwin* has no insight into Cameron's motives, and we regret any possible inference to that effect.



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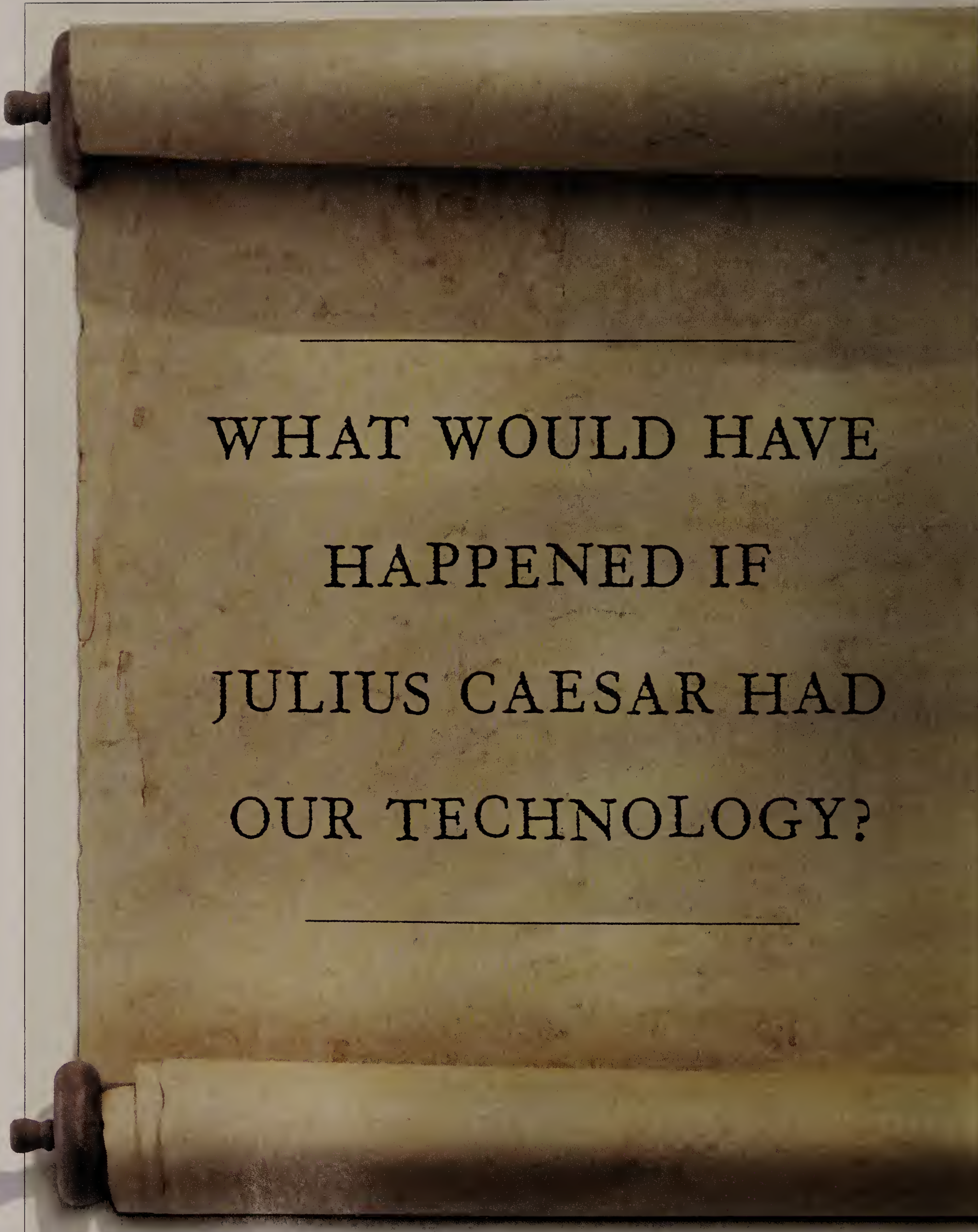
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A scroll is unrolled on a parchment-like background. The scroll is held by two wooden pegs on the left side. The text is written in a serif font and is centered on the scroll. There are horizontal lines above and below the text.

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HAPPENED IF
JULIUS CAESAR HAD
OUR TECHNOLOGY?

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Julius Caesar was like most modern day
in charge of global organizations. He
a mission to accelerate growth and
effectively manage his global empire.
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eventually became, well, history.

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Novient technology,

his empire

around today?

We don't ask us to explain

we got it. Just go with us here.)

So Caesar signs on with Novient. Now

his generals, who are fighting battles all

the world, suddenly start collaborating

with each other in real time. They're recognizing new

opportunities to exploit. When their supply

CAESAR AND GENERALS
COLLABORATE IN REAL TIME

are cut off, they know

immediately and respond

even if it costs them crucial

resources. Very soon, Caesar's

generals have blown right past

the Gauls and conquered

the known area of the world.

So now Caesar has all
these new people and he's
got more assets. Of course,
adding a lot of bodies can
cause more problems than
solutions. But with Novient, Caesar is
improving productivity and optimizing

CONNECTING ARMIES
AND GOVERNMENTS SPREAD
AROUND THE WORLD

the performance of all his

people. Novient technology

enables the Roman Empire

to grow rapidly and collaborate

with all of the newly conquered lands.

Suddenly, building more coliseums isn't a

problem. They are popping up everywhere

and season ticket sales are at an all-time high.

ROMAN EMPIRE OPERATES
AT OPTIMUM EFFICIENCY

But best of all, Novient's ability to identify

"best-fit" personnel has enabled Caesar to

put every one of his people in the

right job. They are productive

and excelling like never before.

Simply put, they're happy. So,

instead of getting a knife in

the back, Caesar is suddenly

getting a big pat on the back.

no toga
no sandals
no service



As you can see, if Julius
Caesar had been able to
use Novient's technology,
the Roman Empire might
still be dominating the

entire world today. And, of course, you
would be reading this ad in Latin.

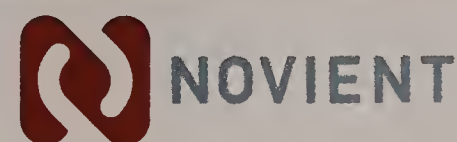
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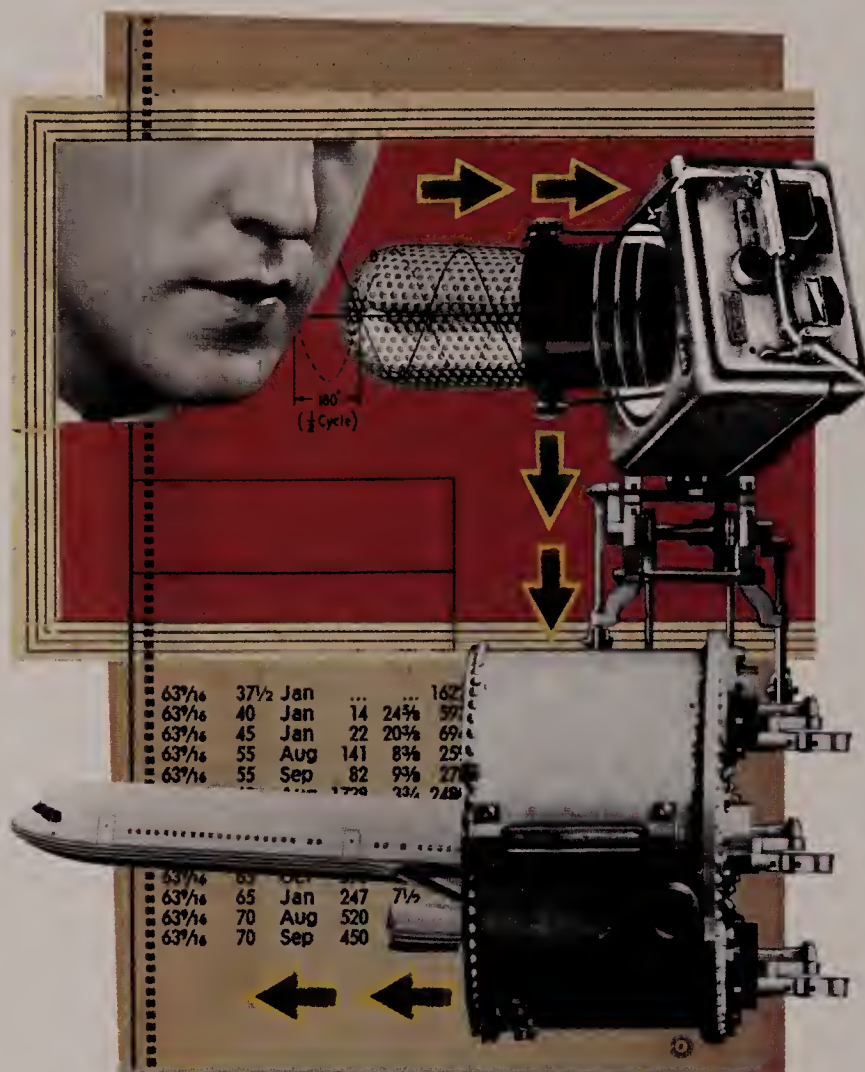
BUSH
FOR CAESAR

Elect
Al Gore
Caesar



All Talk, All the Time

Can speech recognition systems deliver real business benefits?



A FEW YEARS AGO, THE COMPANY I WORKED FOR installed an employee directory on the phone system that used speech recognition. You would call up, the system would say "Name, please," and you'd say the name of the person you were looking for.

You'd say "Jim Alter," and the system would respond, "Ring Kim Walters." When Kim picked up the phone, you'd ask her to transfer you to Jim. It was a lot more efficient than the old way of making inter-office phone calls.

I can't imagine how my old employer expected that system to deliver any kind of ROI, and I didn't worry too much about it. But the issue resurfaced again recently, when I encountered a speech recognition system that United Airlines was using to offer arrival and departure information on its 800 number. With companies like United, Charles Schwab, Office Depot and Thrifty Rental Car all deploying sophisticated speech recognition sys-

tems, had the technology finally been perfected? Was it delivering real business value? And how would it evolve?

To answer the first question, my test regimen involved calling various speech recognition services, for example, Tellme Networks (800 555-8355), which uses technology from Nuance, and AirTran Airways (800 247-8726), which uses software from SpeechWorks International to provide arrival and departure information. Nuance and SpeechWorks are the two dominant providers of speech recognition systems. When I spoke softly or loudly in a normal voice—even when I used a staticky cell phone to place the call—it was hard to trip up the systems. I'd ask Tellme for a traffic report, for example. It guessed from my area code that I was in Boston, and when I said "Mass Pike," it knew I was asking about the Massachusetts Turnpike.

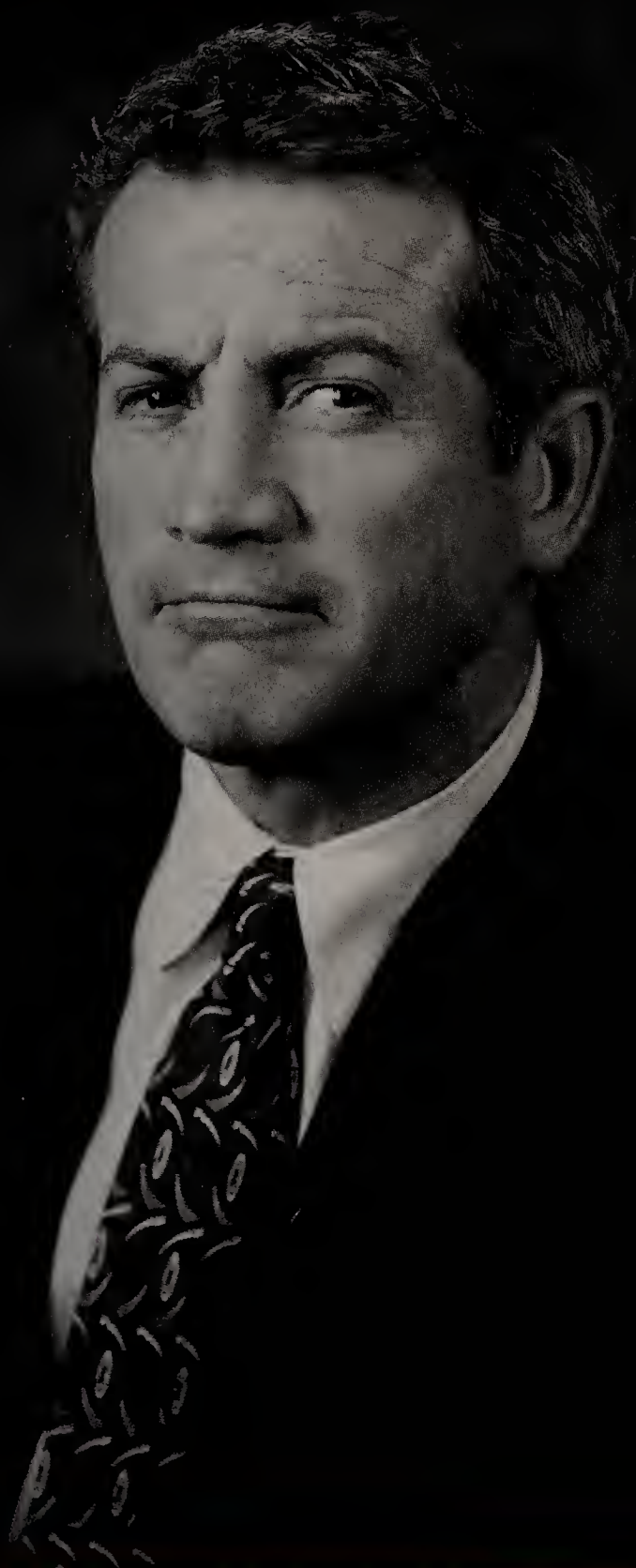
Only when I adopted a terrible French accent could I confuse Tellme into delivering the ski report for King Pine, N.H., instead of Killington, Vt. Same with phone systems that used SpeechWorks' technology—they understood me just fine when I talked normally, but if I did my Boris Badenov impression, they'd sometimes get thrown. (I was told by the director of communications at Manulife Financial in Boston that one of their customers was thrilled when the company's SpeechWorks system could understand him even without his false teeth.)

The first generation of speech recognition systems are primarily designed to eliminate routine informational calls—like "When does flight 268 arrive in San Jose?"—so that call center reps can focus on revenue-generating interactions. "Before we turned on our system, we had a lot of reps who were just giving stock quotes," says Cecily Baptist, vice president of voice technology solutions at Charles Schwab, the San Francisco-based financial services company. "Now, you can get a stock quote using the automated phone service, and we have highly skilled reps who are having more complex conversations with clients."

Speech recognition can also save money. Stuart Patterson, CEO of Boston-based SpeechWorks, says, "One

"When will the computers be ready for the new people?"

Translation: I think I forgot to tell you about the new people.



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of our customers, Thrifty, thinks its application, which quotes rental rates to customers who are shopping around, could save 10 percent to 20 percent off the bottom line of the call center." And speech can dramatically reduce hang-ups and shorten call time. A few execs I spoke to also made the argument that speech is safer than Touch-Tone systems, because callers using cell phones while driving don't have to look at their keypads.

Speech recognition applications aren't cheap to implement—Patterson says his company's offerings range from \$35,000 to more than \$5 million—and they take time to develop. AirTran CIO Rocky Wiggins says his company signed a contract with SpeechWorks in May of last year and rolled out its system in January. Wiggins says speech recognition has the best ROI for companies like his with high call volumes, and a certain call type of relatively low complexity—like finding

A few companies are beginning to test speech recognition systems designed to increase revenue, not just cut costs or enhance operational efficiency.

an arrival time, checking on the status of a delivery, or verifying the price and availability of a product.

Some of the more advanced users of speech systems—like E-Trade and Schwab—enable callers to complete entire transactions, like buying a stock or mutual fund. Others are experimenting with speech apps targeted at their own employees.

One of United Airlines' first projects of this type was automating its employee reservation system in 1998 for its more than 120,000 United employees. Their calls to the reservation lines were a bit of a burden, because they created longer hold times for paying customers.

Now, a voice-driven system lets employees reserve flights on their own, without talking to an agent. "The employee system averages more than 2,000 calls a day," says Niru Shah, the director of applications development at United's Networks group in Chicago. "We also have an application that lets people reset their passwords when they forget them. That's one that we developed when our help desk told us that almost 30 percent of the calls they got on a daily basis were related to passwords."

A few companies are beginning to test systems designed to increase revenue, not just cut costs or enhance operational efficiency. Jiffy Lube, for example,

built a system with Tellme Networks that calls prior Jiffy Lube customers to remind them that their car is in need of an oil change. The system will eventually offer customers a chance to make an appointment, according to Tellme Senior Director of Business Solutions Andy Scott.

All of the companies I spoke to were planning further enhancements to their speech systems. Baptist at Schwab says she surveys customers to gauge their satisfaction with the system and also looks for ways to streamline well-used or confusing parts of the speech system. "My job is to make this really satisfying for customers," Baptist says, "and since this is a new technology, that's not always easy."

What does the future hold? Here are some predictions:

- The voice on a company's speech recognition system will become an important extension of that company's brand, says Scott at Tellme. You'll hear a very different voice when you call MetLife versus FedEx versus Southwest Airlines. Hopefully, some standard commands will emerge across systems, so that when you say "main menu" or "help" to any of them, they'll understand.

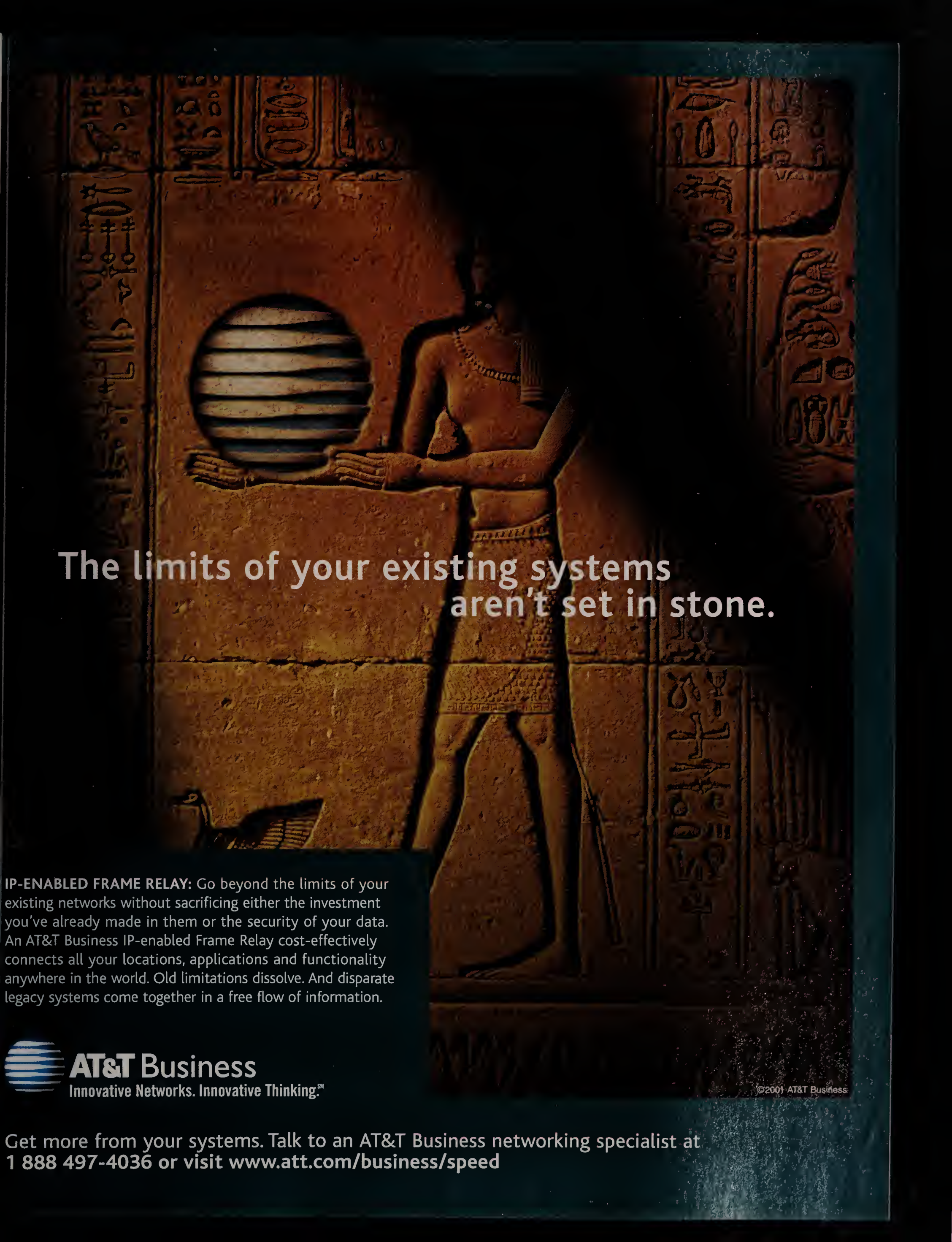
- Voice verification technology, which already works well today to identify callers and link them to their account information, will be slow to roll out. Because it's an added feature (and added cost) to basic speech systems, companies seeking to support high-revenue, frequent callers—a bank's high-net-worth customers, for example—will roll it out first.

- More companies will use speech apps to support employees. Sales executives will be able to call in—instead of dragging around a laptop—to check on orders; delivery drivers will use cell phones to update their supervisors on their progress, or to get traffic information or automated driving directions. (Both are already available on services such as Tellme.)

- Patterson of SpeechWorks says the ultimate goal is the phone system that picks up with "How may I help you?" You'll respond with a complete sentence, say, "I need to cancel my hotel reservation," and it will understand you. The result will be dramatically shortened call times and increased convenience for the customer, who will no longer have to navigate a long menu of options.

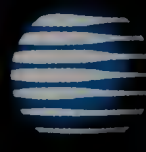
- If my Boris Badenov impression ever improves, I'll be able to use United's system to find out about flights departing Moosylvania for Frostbite Falls. ■

In his free time, Boston-based Scott Kirsner calls up speech recognition systems and asks, "Do you have Prince Albert in a can?" He can be reached at kirsner@att.net. Send feedback and ideas for this column to ecosystem@darwinmag.com.



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A Matter of Trust

Should your company undergo an annual audit of its information handling practices? Will customers think better of you if you do?



IN FEBRUARY 2000, A HACKER STOLE 300,000 customers' credit card numbers from CD Universe and posted them on the Internet, demanding a ransom of \$100,000. When another hacker stole 55,000 credit card numbers from Creditcards.com in September, the online credit transaction company refused to pay ransom; in the midst of the holiday shopping season, 25,000 customers learned that their credit card data had been published on the Web.

Horror stories like these have fueled customers' fears about what happens to their personal data. In a 2000 survey by the Pew Internet & American Life Project, 84 percent of U.S. Internet users were concerned about businesses or people they don't know getting personal information about themselves or their families. "If somebody steals your car, you know how much damage there is. If someone steals your information, you can't calculate the danger," says Don Peppers, founding partner of Peppers and Rogers group, and coauthor of *The One to One Future: Building Relationships One Customer at a Time* (Currency/Doubleday, 1993).

While consumer advocates are clamoring for the government to step in and set standards on the collec-

tion and use of customer data, companies whose business models depend on gathering customer information—particularly those doing so over the Web in order to personalize their offerings—shiver at the very thought. They worry that government regulations would be quickly outdated by technological advances.

Enter the Personalization Consortium, a group of some 60 companies, all of which would much rather set the ground rules themselves than have to abide by government regulations. And all of which stand to make a lot more money if they can convince consumers that there's no need to worry about forking over personal information. The Consortium includes technology vendors (like Broadvision, DoubleClick and Epiphany) and consultants (such as PricewaterhouseCoopers and Peppers and Rogers Group) as well as companies with substantial Web operations (like American Airlines and Charles Schwab).

On January 31, the Personalization Consortium announced a set of relatively straightforward best practices privacy principles. The principles, which sound an awful lot like the Federal Trade Commission's Fair Information Practices, promote such basic things as providing clear and conspicuous notice of information practices, collecting no more customer data than needed and using appropriate security measures. (To see the complete text of all six privacy principles, visit www.darwinmag.com/printlinks.)

Although the principles themselves may be somewhat predictable (and predictably vague) the Consortium is also advocating annual information audits. The Consortium maintains that companies that adhere to its principles—and prove it by getting their information collection and handling practices audited annually by a third party—will be more likely to win consumers' trust.

"The model will be analogous to how businesses today follow generally accepted accounting principles when reporting their financial statements, which are then subject to independent audit," says Peppers, who serves as cochair of the Consortium along with Martha

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Rogers. At press time, the Consortium planned to announce a detailed set of auditing criteria by May 1.

Privacy analyst Claudio Marcus, a research director at Gartner, sees the policies as a great step in the right direction for building consumer confidence. "If they are broadly accepted and applied, they'll have a very positive impact on consumer perception as to the abuse of information," he says.

But judging from past attempts to create privacy certification mechanisms, that's a big if. The American Institute of Certified Public Accountants' CPA WebTrust, a third-party Web security certification service (which includes quarterly audits) has failed to find much of a market, according to Eddie Schwartz, vice president of strategy at Guardent, a security and privacy consultancy in Waltham, Mass., and former chief information security officer at Nationwide. He says that's because large organizations so far haven't seen the value of spending thousands of dollars on certification. Several of the big accounting firms gave up trying to sell the product and are now offering their own version of a privacy seal, he says.

If the Personalization Consortium wants its principles and auditing criteria to become the standard, it needs to convince companies that customers will attach enough importance to the audits to justify the expense. Peppers says that the price tag for an information audit would likely range from a few thousand dollars for a small company with a few thousand customers to \$100,000 or more for a large company with multiple lines of business and scores of call centers. Certainly that cost falls well below that of a financial audit. But the Consortium's pitch to would-be members isn't as straightforward as one might think: Consortium member PricewaterhouseCoopers has a vested interest in the widespread acceptance of annual information audits. (Marcus goes so far as to utter the words *cash cow* aloud.)

Whether the Consortium's standard takes hold will largely depend on whether the forthcoming auditing criteria have teeth.

Schwartz warns that standards with too much leeway render audits meaningless. The general auditing guidelines already published by the Personalization Consortium leave the door open for at least some latitude. To pass the audit, for instance, companies will only have to meet the Consortium-defined standard of "substantial compliance." Marcus worries that companies will be able to pass even if they have loopholes in their information handling practices—and customers won't necessarily have any way of knowing what those loopholes are.

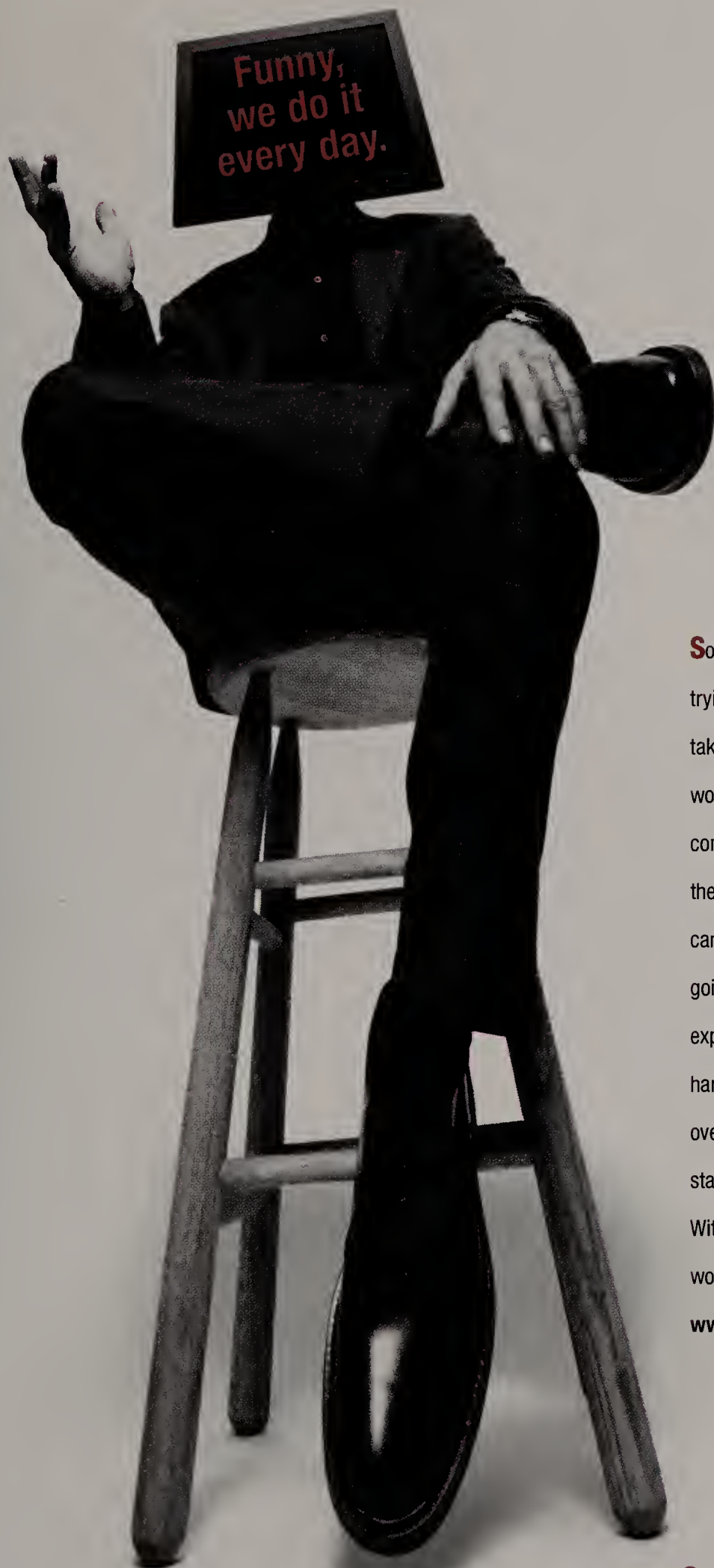
Nonetheless, Marcus believes that the process of adopting the privacy policies and undergoing an audit will be a valuable exercise for most companies. "The analogy to accounting very much applies," says Marcus. "If companies weren't required to do taxes and close their books in the systematic fashion an audit ensures, chances are most companies' books would be a mess. That is a way to make sure people go through a systematic process and understand where the weaknesses lie, and what things need to be taken care of."

Thornton May, corporate futurist and chief awareness officer at Guardent, applauds the Personalization Consortium's efforts, and agrees that the six principles are the right six. But he and Schwartz remain somewhat skeptical. "In the United States, people don't own their personal data," says Schwartz. "It's owned by companies." And unless that changes, he says, privacy seals are nothing more than "window dressing on [companies'] desire to use information in any way they need to." In May's words, "It's like putting hypoallergenic lipstick on a pig."

Companies that really want to earn their customers' trust must take privacy and security seriously. Although adopting these privacy principles and undergoing annual audits are as good a place as any to start, ultimately, companies must have consumers' best interests at heart. Because few customers will be fooled by a little lipstick. ■

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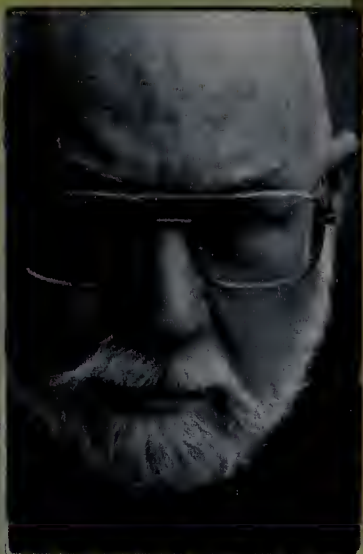
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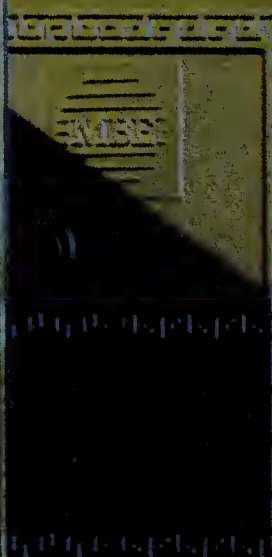
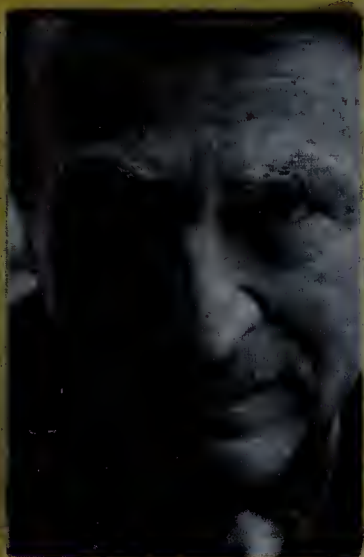
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How do technology initiatives fail?

Each in its own way. Mail Boxes Etc. spent \$25 million to position itself as the real-world shipping partner to the virtual e-tail space. It was indisputably a great idea. Only one problem. The technology doesn't appear to work. Many franchisees are in revolt against the system, calling it "a pipe dream." Headquarters insists everything is just fine. But key customers are disenchanted. Read on for a cautionary saga of frustration, stubbornness, poor communication, arrogance, raw power and wasted opportunity.

MBE founder Tony DeSio (far left) regrets "abandoning" franchisees to hand-picked successor Jim Amos (bottom right). Franchisee owner John Boyd (top) has formed a separate group to fight Amos' technology project.

It's a busy lunchtime at the Mail Boxes Etc. on Beacon Street in Newton, Mass. A well-heeled matron needs to send a trio of cashmere sweaters in sherbet hues to her vacation home. Uniformed delivery guys hustle in, grab their packages and go. The phone rings constantly.

Owner John Sousa maintains his good humor as he moves briskly to help his customers. His smile fades, however, when he attempts to price a customer's package using an Internet-based shipping, or manifest, system called iShip. "I have attempted to connect every hour on the hour, and it still hasn't worked," says Sousa, who owns another Mail Boxes Etc. (MBE) in Brighton, Mass. Getting no joy from iShip, he turns to an archaic DOS-based system that dates back more than a decade. "It's not sophisticated, but it works great," he says with a shrug.

It wasn't supposed to be like this.

The iShip system is part of a massive tech-

nology overhaul MBE embarked on two years ago. The brainchild of MBE President and CEO Jim H. Amos Jr., the project was meant to position San Diego-based MBE as the premier shipping partner for e-tailers. "Because of our bricks-and-mortar on the ground, I thought we might have an opportunity that no one else had," says Amos.

By building a satellite network to connect the 3,500 domestic franchises with corporate systems, an Internet-enabled point-of-sale (POS) system and the iShip manifest system, shipping at MBE would become enticingly simple. The idea was that a returning customer would need to give only his phone number to the MBE clerk for service. Up would pop his entire order history and recipient address information. Customers would no longer need to carry their address books into the store. They would feel instantly at home, as if they were part of a special group. At least, that was the plan.

"It's a great idea, all right. It just doesn't work," says Sousa. Besides using the DOS manifest as the default shipping system, Sousa has ditched the satellite network in favor of a local digital subscriber line (DSL) provider for Internet service. He relies on paper forms in duplicate to do the bulk of his business. To Sousa, the new systems have been a big disappointment. "None of it connects. This is all a pipe dream."

Sousa is not alone; in February 2000, a group of MBE owners formed the Independent Association of Mail Box Center Owners (IAMCO) to combat what they see as headquarters' resistance or inability to improve technology, among other issues. According to IAMCO President and MBE owner John Boyd, the group has about 400 members representing 500 stores.

Although MBE executives insist that the technology works fine, an internal MBE memo obtained by *Darwin* seems to suggest that the company is indeed rethinking its technology strategy, which would mean deep-sixing a lot of money. All told, MBE spent in the neighborhood of \$25 million on its technology program, including equity investments in a host of dotcoms such as iShip, in which MBE invested \$4 million. That's a significant chunk of change for a company with only \$81 million in revenues (sales for the global MBE network were approximately \$1.4 billion in fiscal 2000).

The system is only part of the problem with Amos' e-business strategy. Its high-profile agreement to be the exclusive shipper for online auction giant eBay has stalled, and iShip is faltering financially.

(As *Darwin* went to press, MBE announced that it had been acquired by shipping giant United Parcel Service of America

"The new technology project was a great idea, all right. It just doesn't work."

—JOHN SOUSA, MBE franchise owner



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(UPS). Amos would not specify an amount, but other press reports put the price in the neighborhood of \$191 million. Amos says he plans to stay as CEO.)

The MBE story is shaping up as one giant case study for how not to do a strategic technology initiative. Indeed, some believe this project has negatively affected MBE's health. "The growth of the network has come to a complete standstill. There are a huge number of Mail Boxes Etc.'s up for sale all over the country," says Tony DeSio, cofounder and former CEO of MBE. DeSio, who retired in 1998, handpicked Amos (a former Marine captain and ex-head of the I Can't Believe It's Yogurt chain) as his successor. He voices regrets about the current tension in the company. "I feel like I abandoned all these people who put their faith in me," he says.

While the UPS deal will likely add an infusion of capital to help mend MBE's technology woes, it's still worth asking why such a well-intentioned idea failed so signally. After all, the plan to connect the franchises and Internet-enable their operations was not fundamentally flawed. The answer seems to lie in a tangle of poor technology decisions, bad market timing, and a disconnect between the services MBE offers and what many of the e-tailers want.

ROLLING THUNDER

MBE started about two decades ago, when many of the outlets ran on little more than phones, fax machines and simple Casio cash registers. Some owners added PCs throughout the 1990s, but there were no corporate technology standards. In fact, since MBE's franchise agreement didn't stipulate any particular technology requirements, Amos knew that he couldn't force



MBE franchise owner John Boyd started an independent association of MBE owners to push for technology change.

new systems onto anybody. He needed to persuade at least the majority of franchise owners to sign on to his idea.

So in April 1999, the MBE executive team commenced a 30-city road show, dubbed Rolling Thunder in Amos' beloved military spirit. The task: to paint the picture of Amos' technology vision for MBE and sketch out an implementation road map. For several months, the group met with franchisees in conference rooms at local hotels on Saturday or Sunday afternoons, when the owners could afford a few hours off.

In a series of PowerPoint slides, Amos, along with CIO Ray Causey and several others, described the technology plan, its costs and time frame. The executives explained that MBE corporate would pay the fee for the first year to connect to a VSAT (very small aperture technology) satellite network as well as 50 percent of the systems' cost. Franchise owners would have to cough up about \$2,000 per store for the POS and manifest system on top of

8.5 percent for royalties, a media fee and a marketing fee.)

Sousa recalls thinking that the technology was dated. The satellite hookup, for example, would run at a speed of 115Kbps for file downloads and 52Kbps for uploads—"That's the same speed as a dial-up connection," he says. When he and others questioned why MBE wasn't going with speedier DSL or cable modem technology, the executives (including Causey) said those services were not available in all MBE locations. "I didn't see why they wouldn't make other arrangements for those who couldn't get DSL. Why did I have to go with this older, slower technology?" says Sousa.

Overall, however, the pitch was a success. Amos and other executives stayed on the message of increasing revenue and protecting MBE's enviable number-one position in its sector. At the Rolling Thunder meetings, 80 percent of the franchisees agreed to install the new systems.

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MBE founder Tony DeSio: "I feel like I abandoned all these franchisees who put their faith in me."

THE NIGHTMARE BEGINS

As the rollouts began during the next year and a half, it quickly became apparent that MBE was ill-prepared to handle the implementation and support issues of such a large project. "I bought the POS, iShip and VSAT. I couldn't get any of it to work," says Cathy Thomas, owner of an MBE branch in Paoli, Pa., and a member of IAMCO's board. In October 1999, desperate for technical support, Thomas repeatedly called her franchise area representative as well as the support number at headquarters. All she got was a recorded message. "I left voice mails that I was having major problems. They didn't call me back until February 2000." Like Sousa, Thomas is using the old DOS system to keep her business running. "I was 100 percent for the systems, but this has been a total disaster," says Thomas.

Bob Cust, owner of an MBE shop in Brandon, Fla., was able to get the VSAT system to work, but he was incredibly frustrated at its slow performance. At times, he says, it ran at 13Kbps, or about half the speed of the slowest America Online connection. "Even the support technician back at MBE

headquarters laughed about it," says Cust. He has since signed up cable modem service, which he says costs less than the \$160 monthly charge for VSAT.

Franchise owners also say that they've had to pay more than the advertised \$2,000. Boyd says that the system cost franchise owners upward of \$4,500, depending on the configuration chosen.

MBE executives maintain there have been some challenges with the technology but say the implementation is proceeding as planned. In a written statement, Amos says, "We remain confident the technology platform is the best solution for our needs."

And not all the franchise owners are unhappy with the technology. "If a franchise owner told you it doesn't work, he doesn't know how to use it," says Mike Long, who co-owns four MBE stores in the Detroit area.

But the internal MBE memo from early February paints a different picture. The communication was sent to all franchisees by MBE's Automation Committee, a corporate-blessed franchise-owner group that deals with technology. Taking a conciliatory tone, the memo tacitly acknowledges the widespread technology problems and

announces a plan to "begin to deliver effective and efficient software and systems" to the franchisees as soon as possible. In the meantime, franchisees should make their own arrangements for technology needed to run their businesses.

It is perhaps not surprising, then, that MBE declines to state exactly how many franchise owners are using the systems. According to Heather Rose, vice president of learning and people services for MBE, (and Amos' daughter) nearly 3,000 U.S. MBE shops are "technology ready," which means that the POS system, manifest system and satellite connection are in place. It does not mean they are using the technology. In fact, in a Securities and Exchange Commission filing in September 2000, iShip parent Stamps.com indicated that exactly 1,100 MBE shops were using the technology.

WHITHER EBAY?

One of MBE's linchpin agreements for its e-commerce strategy also seems troubled. Amos sold franchisees heavily on the idea that the common platform would help move MBE into e-commerce. In fact, MBE's investment in iShip's software made it an attractive partner for eBay, and a five-year deal between eBay, MBE and iShip was announced in April 1999. According to franchise sources, MBE franchisees paid eBay \$2 million from their national advertising fund on the assurance that the company would be eBay's exclusive partner.

The concept was simple: After an auction closed, the eBay system would push the auction's seller to an iShip page where he could input the package's dimensions and weight. The system would offer advice on the best shipping method and its associated costs.

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Project Failure

When ready to ship, the seller could print out a page called a "traveler" from the iShip system and take it to his local MBE shop. The MBE person would then scan a bar code on the traveler, and all the package information would pop up on the screen—thanks to a link between iShip and the MBE POS system. The eBay seller would be entitled to a discount of around 15 percent off the MBE list price for packing and shipping.

That was only the beginning. MBE and eBay had grander plans: to wit, a "hold for inspection" service whereby eBay sellers would ship high-cost items to a local MBE office for buyers to examine. If the buyer wanted to go ahead with the purchase, escrow funds would be released to the seller. If not, the MBE center would ship the item back to the seller. The eBay and

MBE press releases announcing the 1999 partnership envisioned a cobranded interface to be integrated into the eBay site.

But the bloom now appears to be off the eBay-MBE-iShip agreement. The eBay seller community message boards are rife with complaints about the cost of shipping with MBE, and MBE officials can't say when the "hold for inspection" service might be implemented. In fact, MBE is no longer eBay's only shipping partner. Near the end of last year, UPS entered an agreement to provide similar shipping services. At press time, UPS was featured more prominently than MBE on eBay's seller services page. "How dare [MBE] spend \$2 million of our money without making sure it was an exclusive agreement," fumes Thomas. It is currently unclear what impact the MBE/UPS deal will have on the eBay partnership. MBE executives would not confirm troubles with the eBay relationship, and eBay officials declined to comment for this article.

Moreover, Stamps.com is struggling

financially. MBE may be forced to buy iShip and its parent if it wishes to continue with the iShip system. That might explain the 20 cents per transaction fee for using iShip that MBE announced to franchise owners in January. This fee replaces the \$500,000 per month that MBE paid to iShip throughout 2000.

But there's some doubt that the eBay deal would translate into a boom in business even if it were exclusive. MBE is not the right fit for the eBay seller demographic, says Bob Parker, vice president of commerce strategies for AMR Research, a Boston-based market research company. Most eBay Power Sellers (who account for roughly 80 percent of the transactions on the auction site) run their businesses from their homes and don't mind doing their own packing. "It's much more convenient for them to have UPS just come and pick it up," says Parker. Power Sellers also tend to be very cost-conscious, which is not MBE's target consumer, says Kurt Schusterman, MBE vice president of marketing. "We're only looking for a small portion of the eBay community—those who ship odd-shaped items," he says.

Whatever the future of e-commerce may hold, Amos remains bullish on the technology odyssey. While he admits that the company has yet to see a return on its technology investment, he says, "We're not looking for a short-term return. We're looking at doing the right thing."

At least the owners and Amos agree on that. Most of the franchise owners interviewed for this article still believe in the value of the Mail Boxes Etc. name, despite the pain inflicted by the technology effort. Says Sousa, "I still believe we can work this out. I love this business." ■

"I was 100 percent for the systems, but this has been a total disaster."

—CATHY THOMAS, MBE franchise owner



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CEO Phil Satre championed the first national player card in the casino business. Harrah's now tracks customers' gaming activity across its 21 properties and rewards them for loyalty to the Harrah's brand.

Harrah's Knows What You Did Last Night

While its competitors build volcanoes, sinking ships and replicas of the Eiffel Tower to lure customers, Harrah's is betting on a service-oriented strategy enabled by IT. So far, the gamble is paying off.



At Harrah's, loyal customers like Joann Idleman get the royal treatment.

WHEN JOANN IDLEMAN ARRIVES AT THE AIRPORT IN LAS VEGAS, a sleek white limousine is waiting to whisk her off to Harrah's hotel and casino. She doesn't bat an eyelash as she passes Caesar's Palace and the Mirage, two showy resorts where the 67-year-old entrepreneur from California was once a regular. Now she wouldn't dream of staying anywhere but Harrah's.

Upon arriving at the hotel, she is greeted with a big smile by her personal host, Gary Ernst, who makes her hotel reservations and books her seats at concerts and boxing matches. In her suite, she finds fresh cut flowers, cookies, chocolate-covered strawberries, cold drinks in the fridge and a welcoming voice mail from the concierge. If she goes to Harrah's on her birthday, there's cake in the room. "I think they know my whole life history," says Idleman. "Whether it's a birthday or an anniversary, there's always something in the room to

BY MERIDITH LEVINSON

acknowledge that, and that to me is special."

Idleman has been gambling at Harrah's since 1995; in 1998 she started staying at the hotel exclusively.

The year before, the company had rolled out a loyalty card program called Total Rewards, which tracks customers' gaming activity and gives them rewards to encourage them to spend more money at the slots and tables. Although Idleman says it was the service—not the player card—that made her a Harrah's devotee, the company would not have been able to provide its high-caliber service without the card. And thanks to that service, Idleman's spending increased by 72 percent from 1997 to the present. Now, she spends between \$5,000 and \$10,000 on gaming per visit. Ernst and company better treat her like a VIP.

Knowing the Customer

While not all of Harrah's guests have their own host, the Las Vegas-based casino operation does its best to give everyone the appropriate amount of personal attention, whether it's leaving sweets in their room or offering to buy them dinner. The loyalty card, which works at any of Harrah's Entertainment's 21 U.S. properties, helps employees determine what level of service each customer should receive. As customers use the card, Harrah's collects information about their gaming habits, which it then uses to lure them back to the casino via customized offers and to provide personalized service when they do return. The card also gives customers good reason to be loyal to the Harrah's brand because it lets them earn points that they can redeem for cash or comps (free tickets to shows, hotel rooms and dinners).

"The prevailing wisdom in this business is

that the attractiveness of a property drives customers," says Gary W. Loveman, Harrah's COO. "Our approach is different. We stimulate demand by knowing our customers."

For instance, someone who always vacations at Harrah's in April will receive a promotion in February or March, redeemable for a free weekend in April. "Our competitors are competing on hardware," says Richard Mirman, Harrah's senior vice president of marketing. "We're competing on software. They spend money to attract customers, but we build the technology infrastructure to invite customers."

So instead of building glitzy casinos with eye-popping attractions out front, Harrah's is betting on a service-oriented strategy enabled by IT. In the mid-1990s, the company paved the way for its national loyalty program when it began building an information system called WINet (winner's information network). Today WINet links all the properties and allows the company

to collect and share customer information companywide. (For details on the technology, see "How It Works," Page 68.) It was a gutsy move, dependent on overcoming mind-boggling technological challenges and the equally formidable task of changing Harrah's corporate culture from an every-casino-for-itself outfit to a collaborative, customer-focused enterprise.

But the gamble appears to be paying off. The number of customers visiting casinos in different markets jumped from 13 percent in 1997, when Harrah's launched its loyalty card program, to 23 percent in 1999; between 1998 and 1999, growth in cross-market revenue increased 33 percent. Most important, customers are spending more when they visit. As a result, Harrah's profits have more than doubled since it introduced the loyalty card, reaching \$208.5 million in 1999.

Harrah's winning streak is likely to continue because information tracked through the loyalty card allows analysts to predict the



Struck by the casino industry's extraordinary disloyalty, COO Gary Loveman saw an opportunity for Harrah's to increase its market share.

HARRAH'S CUSTOMERS: 19 MILLION... SQUARE FEET OF GAMING SPACE: 1.2 MILLION...

know your customer

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potential value of each customer. Using that knowledge, Harrah's can create customized marketing programs for each of them.

That focus on customers' potential rather than their history differentiates the company from the rest of the industry, according to William Schmitt, executive director of CIBC World Markets in New York City. "Everyone tracks their customers' play on a real-time basis," he says, "but Harrah's matches what its customers are worth with what they might be worth and has a 90 percent hit ratio in turning customers who are presently worth \$500 into customers who are worth \$5,000." As a result, he says, Harrah's has been able to gain market share and lead its competitors in profit growth from 1997 to 1999. Initially, Mandalay Bay Resort & Casino, MGM Mirage and Park Place Entertainment didn't think there was much to Harrah's big technology push or to its player card program, but now they're all scrambling to roll out their own national player cards, Schmitt says.

If the challenges that Harrah's undertook to establish this program are any indication of what its competitors will face, it won't be easy. They, too, will have to suffer through a tedious IT standardization effort and a painful cultural transformation.

Bingo!

Harrah's history of customer service dates back to 1937, when Bill Harrah opened his first bingo parlor in Reno, Nev. Harrah was committed to getting to know his customers and asked them all about themselves. In fact, his conversations with customers led him to be the first to install carpet on a casino floor.

Phil Satre, who became president and CEO in 1984, continues the late Bill Harrah's legacy. In 1988, he began sending feedback forms and congratulatory certificates to people who had won slot machine jackpots.

"I looked at these cards and noticed that some customers visited four or five Harrah's properties," says Satre. That insight ran contrary to a long-held corporate assumption: that customers were partial to a particular Harrah's casino and visited only that property.

He shared these findings with John Boushy, the company's senior vice president of brand operations and CIO. The two began to muse on the possibility of tracking customers across different properties with a single, national player card and rewarding them for patronizing more than one Harrah's site. At the time, Harrah's had a player card program, but the cards were valid at only one property since the card-reading systems in each location were different. The company's highly decentralized operating structure and various IT systems would have to change in order to make a national player card program work.

Just as Boushy set out to standardize systems across all properties in the early 1990s, gambling on Indian reservations and riverboats was legalized and an expansion boom followed. The plans for the player card program were sidelined, though Satre remained convinced that it was a worthwhile goal.

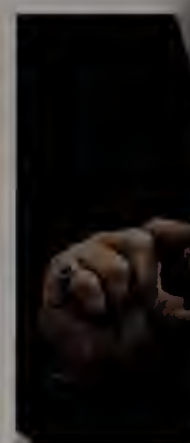
When the boom and Harrah's growth began to slow in the mid-1990s, Satre's interest in the project was rekindled by

Loveman, then a young Harvard Business School professor who was working with some of Harrah's vice presidents in his executive development program.

"What was striking to me about the casino industry was that it was marked by extraordinary disloyalty," says Loveman. He saw an opportunity to create the same kind of loyalty in the gaming industry that people feel toward brands such as Nike, Procter & Gamble and Tommy Hilfiger. Loveman wrote an unsolicited letter to Satre that suggested the company focus on driving what he called "same-store sales growth"—increasing sales at existing facilities instead of opening new properties. He proposed two ways to increase sales at existing casinos: through service, which Loveman characterizes as traditionally "lousy" in the casino industry, and marketing. Satre not only agreed wholeheartedly, he hired Loveman as his COO. Sure, the strategy was risky, but it was a risk Satre believed Harrah's had to take.

Wild Cards

For its service-oriented strategy and the loyalty card program to work, Harrah's had to link all of its properties to enable companywide information sharing. The IT department was up against incredible odds. It had to get two different computer platforms—an IBM system that ran the lodging,



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For Mobile Professionals, Wireless Email Is Just the Beginning

THE U.S. WORKFORCE IS ON THE MOVE. Initially armed with laptops, but now increasingly turning to wireless handheld devices, these mobile professionals will make up more than one-third of the U.S. working population in the next four years, according to IDC, the Framingham, MA-based research firm.

Already, in airports, at conferences, in hotel lobbies—even in the cube next door—wireless devices such as the RIM Wireless Handheld™ are becoming nearly as ubiquitous as cell phones, as employees, unshackled from their desks, go about their business.

The Killer App

As with most technologies that find immediate, widespread acceptance, wireless handheld devices have been blessed with a killer application—in this case, email on the go.

Wireless email service is being used at every organizational level within the enterprise—from field service personnel to the CEO. And, like any killer app worth its salt, wireless email brings a host of benefits to its users.

For example, by combining a device such as the RIM handheld with a wireless email service running on a highly reliable, secure national network, mobile professionals are experiencing an unprecedented boost in productivity.

Essentially, they have become equipped with portable email devices that are always on, always connected, and always in hand, allowing them to reply to messages in their own words, and on their own terms. They can send and receive real-time email messages

from virtually anywhere in the U.S.—from deep inside buildings or out on the street.

Just the Beginning

Even if email was the only application for these handhelds, their future would be assured. But email is just the beginning. Because of the many additional functions built into these handheld devices, what began as just wireless email is quickly becoming the platform of choice for wireless Internet access, as well as a wide variety of wireless enterprise applications.

For example, an increasing number of top executives find these handhelds useful for accessing flight information, conveniently staying in touch with the office or checking stock information while on the go.

But it's not just the top brass that are making use of wireless handhelds. The rich functionality embedded in leading wireless email services is impacting the entire enterprise. Essentially, it has the power to give every mobile employee instant wireless access into the corporate intranet, Web content or any enterprise database from virtually anywhere, anytime. Almost overnight, a company's networking infrastructure has been extended far beyond the confines of the office or a cumbersome modem connection in a hotel room. Wireless handhelds are quickly becoming an integral part of how an organization goes about doing business.



Impact on Enterprise Networking

This means that the CIO as well as the CEO have to take a close look at not only how this technology can benefit the enterprise, but where problems may be lurking.

One problem is that when an employee purchases a wireless handheld, it results in the selection of the network that the device runs on. And it is the quality of the network that ultimately determines how well the device functions and whether the application is successful, or dissolves in a welter of faulty connections and lost data.

CIOs need to be involved up front in selecting a flexible, robust, high-speed national network that can accommodate their needs now, and as their use of wireless grows. By taking control, the IT organization can sidestep a host of networking-related headaches while insuring that the company's employees—who are emailing, accessing corporate data, and inevitably looking to the IT help desk when problems arise—are making the most of their wireless devices.

The Wireless Network Makes All the Difference

The largest and most fully deployed national wireless two-way network in the U.S. has been assembled by Motient, based in Reston, Virginia. Its more than 2,000 base stations extend coverage to over 220 million people in the nation's top 430 metropolitan areas—a substantially larger number than their closest competitor, Cingular Interactive, formerly Bell South Wireless Data.

Carlos Escalante, a national sales manager for Motient, stated that the company's network not only provides the broadest national coverage, but also the highest capacity of any national two-way network. "The network uses a unique layered architecture to make sure that there is more than enough capacity for every user," he said. "This is particularly important for office environments in large urban areas, such as Manhattan and Chicago, where many professionals routinely use wireless devices. The Motient network provides the capacity needed to ensure throughput in these densely populated areas."

Escalante said that because of security concerns, IT managers were reluctant at first to allow wireless devices to access corporate data through the security firewall. "But now, because connectivity between a device operating over the Motient network and the enterprise has been proven to be totally secure, IT executives have given their blessing to this new way of networking."

For example, Motient is now providing its eLinkSM wireless email service to a major New York-based law firm with offices in several other major cities. Using



Motient has more than 2,000 base stations extending coverage to over 220 million people in the nation's top 430 metropolitan areas.

RIM's handhelds, the attorneys are able to go on the road without losing communications with their clients—an absolute necessity in their business.

"The range of applications is almost unlimited,"

eLink and BlackBerry for Wireless Email

eLink is Motient's wireless email service, which allows users equipped with a RIM handheld to send and receive Internet email messages from virtually anywhere in the U.S. This portable email device also acts as an inbox, information manager, pager and calendar.

Users have several options. They can use eLink to wirelessly extend an existing Internet email account. In this case, eLink acts as an "agent"—it retrieves messages from a POP or IMAP mail server and forwards it to the wireless device. Users can also establish a new email address on the Motient network (username@2way.net), and email messages straight to another user's device.

BlackBerryTM by Motient, specifically designed for the Microsoft Exchange environment, combines wireless email with the RIM handheld and the Motient two-way data network. This solution makes the wireless handheld an extension of the user's desktop by providing full messaging capabilities.

The BlackBerry Enterprise Server provides centralized administration, performance monitoring, configurable handheld security attributes, and asset tracking tools.

BlackBerry Desktop Software runs on the user's desktop PC. This integrated suite of applications provides organizer synchronization, folder management tools, email filtering capabilities, information backup, and an application loader. Triple DES encryption technology meets stringent corporate security guidelines for remote email access.

Escalante said. "Medical professionals can send and receive emails updating a patient's status, and health care professionals can schedule appointments wirelessly.

"Financial professionals—or anyone interested in stocks—can receive stock updates and then place orders to buy or sell," he continued. "Data collected in the field by market researchers can instantly be sent back to the home office. Mobile legal workers use the devices to enter time and billing immediately, and retrieve information that may impact their clients. Insurance company claims adjusters are able to access client records from the site of an accident, fax a client the latest policy rates, or investigate the status of a claim and immediately pass the information to the client."

Collaborative Solutions

"Although email was the initial driver, these kinds of advanced wireless applications are becoming increasingly common," Escalante said. "There is a whole new

wave of applications based on Microsoft Exchange and Lotus Notes solutions tailored for wireless devices. We're already beginning to see collaborative wireless computing between mobile workers, customers, part-

ners and the enterprise's home office, based on these handheld devices. In addition, the devices themselves are becoming increasingly more sophisticated and able to accommodate more complex applications.

"However," he pointed out, "hardware and software aside, probably the most important factor in making all of this work is the existence of a secure, flexible, reliable wireless network. At Motient, we know the network is the key."

The Motient network is now handling more than 100 million messages every month and that number is rising exponentially. Its guaranteed network availability and response times set the standard in the wireless industry. The network is compatible with more than 50 handheld wireless devices and has the flexibility and scalability to easily incorporate new devices and ever increasing user traffic.

"All of our customers have found that the combination of devices like the RIM handheld, the BlackBerry messaging platform, our eLink wireless services and the Motient national network has resulted in real solutions for wirelessly extending the enterprise and improving productivity." However wireless handhelds and their applications evolve in the foreseeable future, we know one thing for certain—they are here to stay. ◀

For more information on the Motient network, eLink wireless email service, and BlackBerry by Motient go to www.Motient.com or call 1-800-872-6222 ext. 7404.





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"Almost everything we do in marketing and decision making is influenced by technology."

—Gary Loveman, COO

events and casino management systems, and a Unix system (a multiuser, multitasking operating system) that ran a customer database—to communicate. IBM and AT&T told Boushy that he'd never be able to make it happen. And indeed, it often seemed that the vendors were right.

Boushy and his team started building WINet in mid-1994. It was supposed to go live in February 1996, but by July of that year, it still wasn't complete. To boost his troops' morale, Boushy vowed not to cut his closely cropped hair until the system was up and running. A month later, a vendor's bug decimated the entire database, and Harrah's IT team had to rebuild it from scratch.

By the time the system went live in February 1997, Boushy's hair had reached shoulder length.

While Boushy was growing a ponytail, Satre was trying to convince skeptical regional property managers that the new strategy would benefit their businesses.

Historically, the properties operated independently and competed with each other. General managers were possessive of their casinos, their markets, their customers and their employees. Their casinos were their fiefdoms. Consequently, some regional property managers felt threatened by Satre's push to encourage customers to visit properties in different markets. They thought they would lose customers.

"We challenged the premise that a trip to Las Vegas would take away a trip to Tunica, Mo.," says Mirman. "We did tests, and we showed them that that wasn't the case. Once we built the systems, we were able to prove [to them] that there is a lot of cross-market play."

Satre argued that encouraging customers to visit different casinos would result in them being loyal to the Harrah's brand—and bring in more revenues for the company overall. He also maintained that the value of guests being able to earn points with their player cards all over the United States outweighed the potential cost of internal competition.

Finally, Satre convinced the general managers that the corporate marketing department could help individual casinos effectively leverage the information in the national customer database. The company developed promotions that encourage people to visit both the regional and destination properties. Satre says that programs such as Millionaire Maker, a slot machine contest that sends winners from each casino to a destination property (Las Vegas, Lake Tahoe or Atlantic City) for the final round, are profitable for each property involved. He adds that the company could

not put on these events as efficiently and as effectively without information technology and without having changed property managers' possessive attitudes about their property, customers and employees.

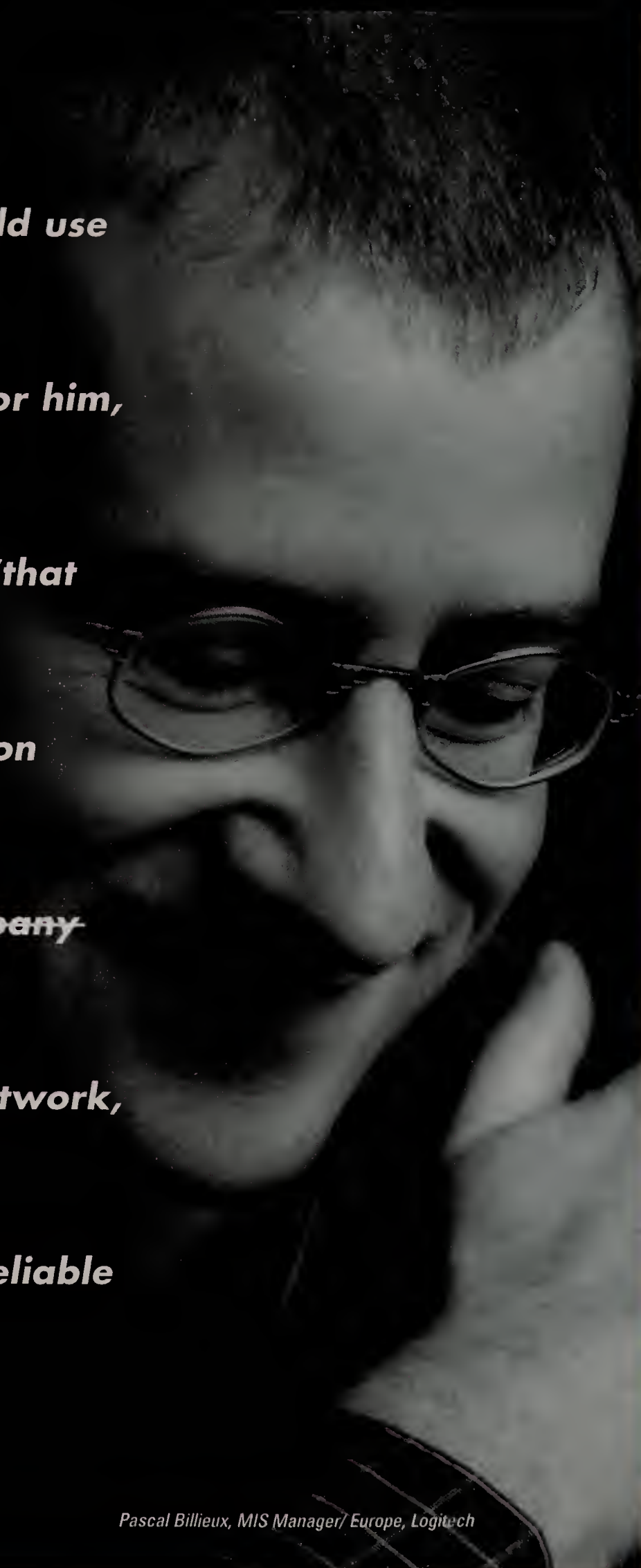
A Shift in Thinking

In addition to convincing dubious regional managers, Harrah's had to shift its culture in two other fundamental ways to succeed with its new strategy, says Loveman. First, the company had to switch its focus from operations to marketing. Harrah's did this by hiring top marketing talent from outside of the casino industry, including Mirman, who had been a financial consultant at Booz, Allen & Hamilton, based in McLean, Va. Second, the company had to become very efficient at both marketing and providing top-quality service, which Loveman calls the two drivers of repeat visitation. He says that having the IT that allows the company to project the value of each customer and to market to them accordingly helps Harrah's deliver these services more efficiently. "Almost everything we do in marketing and decision making is influenced by technology," he says.

Harrah's strategic transformation tells the story of a company caught in the throes of



PHOTOS BY MICHAEL KELLEY



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a cutthroat competitive environment, using modern information technology to return to its founder's original conviction: Serve your customers well and they will be loyal.

Getting back to basics (that is, focusing on its customers) has led the company to operate much more efficiently and realize substantial improvements on its balance sheet. Although it may be third in the industry in terms of total revenues, Harrah's ranks first in profit growth. And that's the number that Satre cares about. "We're trying to be the most successful at marketing to our customers, and that's what we've achieved over the last two years," he says. Because the company has focused on branding, not building, he notes that Harrah's has the best same-store sales growth in the industry.

And as far as Wall Street is concerned, employing IT to better serve customers makes sense. "Because of Harrah's size and the efficiency of its systems, it can drill down into its database and customize its marketing promotions to lower-end players," says CIBC's Schmitt. And that has allowed Harrah's to hold on to those lower-end players—and even turn some of them into high rollers. And building stronger relationships with existing customers is a smart way to grow the business because the cost of retaining a customer is one-tenth

that of attracting a new one. "Harrah's has been increasing market share through technology," he says, which explains why he expects competitors to roll out their own national player cards within the year.

But perhaps the strongest evidence that Harrah's has successfully used IT to transform itself into a customer-focused enterprise is that cus-

tomers themselves notice—and appreciate—that everyone from property managers to waitresses treat them with respect and consideration.

"All the people are very down to earth," says VIP customer Idleman, who claims that the employees are decidedly less friendly at Treasure Island, the Mirage and Caesar's, where she says guests are treated like "a piece of furniture." And it's the personal attention at Harrah's that persuades

Nineteen million customers pour through the revolving doors of Harrah's Entertainment's 21 U.S. properties each year. But keeping track of a customer base larger than the population of Australia requires some pretty sophisticated technology—and an integration strategy that would baffle even the sharpest card counter.

Harrah's winner's information network (WINet) connects and consolidates customer information from all of the company's transactional, slot machine, hotel management

and reservation systems. WINet consists of a national database of operational customer data and a data warehouse (a central repository including both customer data and data on hourly slot machine usage). The marketing department uses the data warehouse to analyze the customer information for patterns and insights. It then creates individualized marketing programs for customers based on their projected worth.

When a customer calls Harrah's to make a reservation, the computer screen of the agent taking the call is instantly populated with the customer's name and tier, where she usually plays, how much she's won and lost, and what she might be worth. The agent then accesses the reservation system to check room availability. He also asks the guest if she's responding to an offer, which she does not have to have on hand, since the offers sent to each customer are recorded in the customer database.

WINet is also the backbone for Total Rewards, the company's tiered loyalty card program. When a player inserts her card into the slot machines or the video poker machines, the amount of time she plays and her wins and losses are recorded in the customer database. Based on how much time a customer spends gambling, she earns points, which she can exchange for comps (free dinners, hotel rooms, tickets to shows and cash).

The player cards work at all 21 Harrah's properties, making Harrah's the only national casino chain with a multiproperty player card. —M. Levinson

How It Works

The technology behind Harrah's customer-focused strategy



Does CRM technology encourage compulsive gambling? For a look at both sides of the issue, see "Technology's Potential Dark Side" on Darwin's website at www.darwinmag.com/printlinks.

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Idleman to step into the Harrah's limo each time she visits Vegas. "Tom Jenkin, the general manager of the casino, stops to talk to people. Even the bell men and the maids get to know you too. They make you feel important," she says. "Harrah's seems more like a family than any place I've been." ■

Senior Writer Meridith Levinson doesn't play the slots although she is a big fan of casino garb. E-mail her your blackjack tips at mlevinson@darwinmag.com.



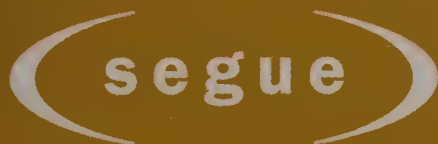
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Best Buy executives say they're committed to putting customers first. Mike Linton, senior VP for strategic marketing, went so far as to give every corporate officer a miniature rolling office chair inscribed "Reserved for the Customer."

Thinking Small

Best Buy wants to make its gigantic stores feel like mom-and-pop shops. Can technology help make it happen?



"It is hell to be a consumer today. A company needs to work like crazy to make things easy for the customer."

—Mike Linton, senior VP for strategic marketing

THINK BACK. IN THE SMALL-TOWN SHOPS OF YESTERYEAR, THE proprietor knew all his customers by name. And there's a good chance he remembered most of their big-ticket purchases. He probably also knew when the customer bought them, how much they cost and the names of the customers' kids.

But it's called yesteryear for a reason—those days are gone. Today, stores can't treat their customers that way unless they're small enough to know everyone who comes in the door. Forget about it if you're a big retail chain, right? Wrong, says Best Buy, the national purveyor of computers, consumer electronics and appliances that's trying to cultivate the small-town feel within its cavernous stores. To do that, the company is banking on customer relationship management (CRM)—both a business strategy and a set of technologies that helps companies market to specific customers.

BY MEG MITCHELL MOORE * PHOTOGRAPHY BY KEVIN MIYAZAKI

Best Buy, based in Eden Prairie, Minn., is a familiar sight on the landscape of American strip malls and shopping centers. The stores, marked by bright yellow and black price tags, are as big as warehouses. They sell phones with cords and phones without cords. Surge protectors and pocket protectors. TVs, DVDs and VCRs. The entire series of *Chicken Soup for the...* books. Ovens, refrigerators, blenders, irons and vacuum cleaners. They offer a bounty that is appealing in an America with a penchant for supersizing. But as consumer electronics products become more complex and bewildering, Best Buy's biggest challenge lies in giving its customers what they want without overwhelming them with what they don't want. And that requires providing personalized customer service on a massive scale.

A Small-Town Experience

But getting an army of salespeople to consistently deliver seamless, customized service is a formidable challenge. For all the promise of CRM technology and Best Buy's eagerness to apply it, is it really possible to re-create the small-town experience in a supersized store?

Maybe. Jeff Roster, senior analyst for retail with Gartner Dataquest, thinks the mom-and-pop shop is a legitimate model. Small-town store owners "were the heroes of the American enterprise," he says. "How do we build that organic knowledge in our companies today? CRM provides the strategy and the tools to do that."

Since Best Buy began implementing its CRM strategy in 1999, the company's gross profits have increased more than 82 percent, up from \$1.3 billion in 1998 to almost \$2.4 bil-

lion in 2000. But while it might be tempting to conclude that Best Buy is successfully using technology to make big time feel like small town, even Mike Linton, senior vice

president for strategic marketing, is unwilling to attribute specific business results to CRM. He will say, however, that the company's largest ongoing direct-mail campaign



Best Buy President Brad Anderson puts CRM at the "absolute top" of his priority list.

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Building an Empire

Although today Best Buy is a vast electronics empire, the company's roots are in local retailing. In 1966, CEO and founder Richard M. Schulze opened a single store called Sound of Music in St. Paul, Minn.

"For the first 15 years or so we were a tiny company, and we were focused on winning in that small space," says President Brad Anderson, who has been with the company for 27 years. In 1983, Sound of Music became Best Buy, which now has 419 stores and 60,000 employees. The company's recent acquisitions of Musicland and Magnolia Hi-Fi add 1,353 stores and 14,450 employees to the realm.

As it has grown, the company has undergone a subtle but certain shift from product-centric to customer-centric. "We're trying to develop learning relationships with consumers so that we can better understand what they need and provide solutions for them," says Barry Judge, vice president of marketing for Bestbuy.com. "Through that process they're going to want to stay with us."

By stashing away in databases the kind of customer information that a mom-and-pop owner would keep in his head—and by making it available to all sales personnel—Best Buy aims to provide better service than other retailers offering similar products. In fact, Anderson puts CRM "at the absolute top" of his priority list. "Most of what we're doing is driven by a vision of what we could mean to specific customers," he says.

Those crucial customers are typically technology enthusiasts with money to spend. Sixty-eight percent are between the ages of 15 and 39; 51 percent earn between \$40,000 and \$100,000 a year. Best Buy's strategy to keep them around looks straight-

forward enough on paper: create a single, holistic view of interactions with each customer and stay one step ahead of customer needs. But what looks simple on paper is tough to pull off in practice.

Single Customer Approach

One of the biggest challenges to successfully implementing a CRM strategy is integrating customer information. Customer touch points—for example, phone, fax, e-mail and point-of-sale interactions—generate separate, isolated islands of information.

16, all of which are—in layman's lingo—"talking to each other." That means that customer information from in-store and in-home repair operations and website and customer relations contact centers is all available to any customer-service person. "No matter where you [the customer] interact with the enterprise—across a number of brands or channels—we have a single customer view," says Scott Lien, vice president of CRM systems.

That degree of integration has helped Best Buy coordinate its customer service

The Lowdown

A customer relationship management (CRM)

strategy outlines how a company shapes its processes around pleasing its most desirable customers. The goal is building a holistic view of the customer across all channels to better understand and act on customer needs. CRM also refers to a wide range of technologies used to track and manage customer interactions.

The Cost ♦ Best Buy has already spent tens of millions of dollars on CRM and expects to spend much more.

The Risks ♦ As Best Buy has discovered, integrating all sources of customer information across all channels to develop a holistic customer view is expensive, painstakingly hard work. Making the transformation from a product-focused company into a customer-focused company is even harder.

The Return ♦ With a holistic customer view, Best Buy has a better handle on each customer's history and potential value. This enables the company to coordinate efforts among channels to present a "single face" to the customer as well as to provide customized service and proactively market products that customers are likely to want to buy.

Consolidating and linking this information takes incredible work. "It's open-heart surgery," Roster says. "We're talking about tearing apart the guts of an infrastructure." Best Buy has whittled down 23 databases to

efforts. For example, a hallmark of Best Buy's customer service is its Performance Service Plans—three-year warranties Best Buy offers on most electronics and appliances. Now a customer with a broken TV

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can call the customer contact center to see if it's still covered, bring it into the store for repairs and track the service over the Web. Similarly, a customer who purchases a computer on the Web and then calls customer service with a question can rest assured that the person on the phone knows what model he bought. Tracking customer information pays off in other ways as well. Let's say someone bought a computer last year and now wants a digital camera to go with it, but wanders into a store without information about his computer. A salesperson can instantly pull up the purchase history and find a compatible camera. And helping the customer go home happier means fewer returns, which translates to a healthier bottom line for the company—and ultimately, lower prices for consumers.

Best Buy also uses a customer's purchase history to create targeted promotions. If Best Buy gets a shipment of cheap DVDs, for example, its campaign-management software can comb through customer data and extract those customers who have opted to accept special offers. From that group, it selects those who have purchased a DVD player in the last year. Now Best Buy can make the offer to those most likely to respond to a direct-mail or e-mail campaign.

Proactive Marketing

Beyond giving the customer what he asks for, a smart company needs to anticipate what he's likely to want next. By tracking typical buying patterns, companies can bundle relevant offers and proactively market them to the right customers. In the world of consumer electronics, constant advances in technology mean that Best Buy's customers are always on the lookout

for the next new thing. "A computer begets a digital camera begets broadband," says Linton. (Best Buy learned the hard way the importance of prescience; it fell victim to the incredible shrinking life cycles of consumer electronics in 1996 when it got stuck with warehouses full of computers with outdated chips.)

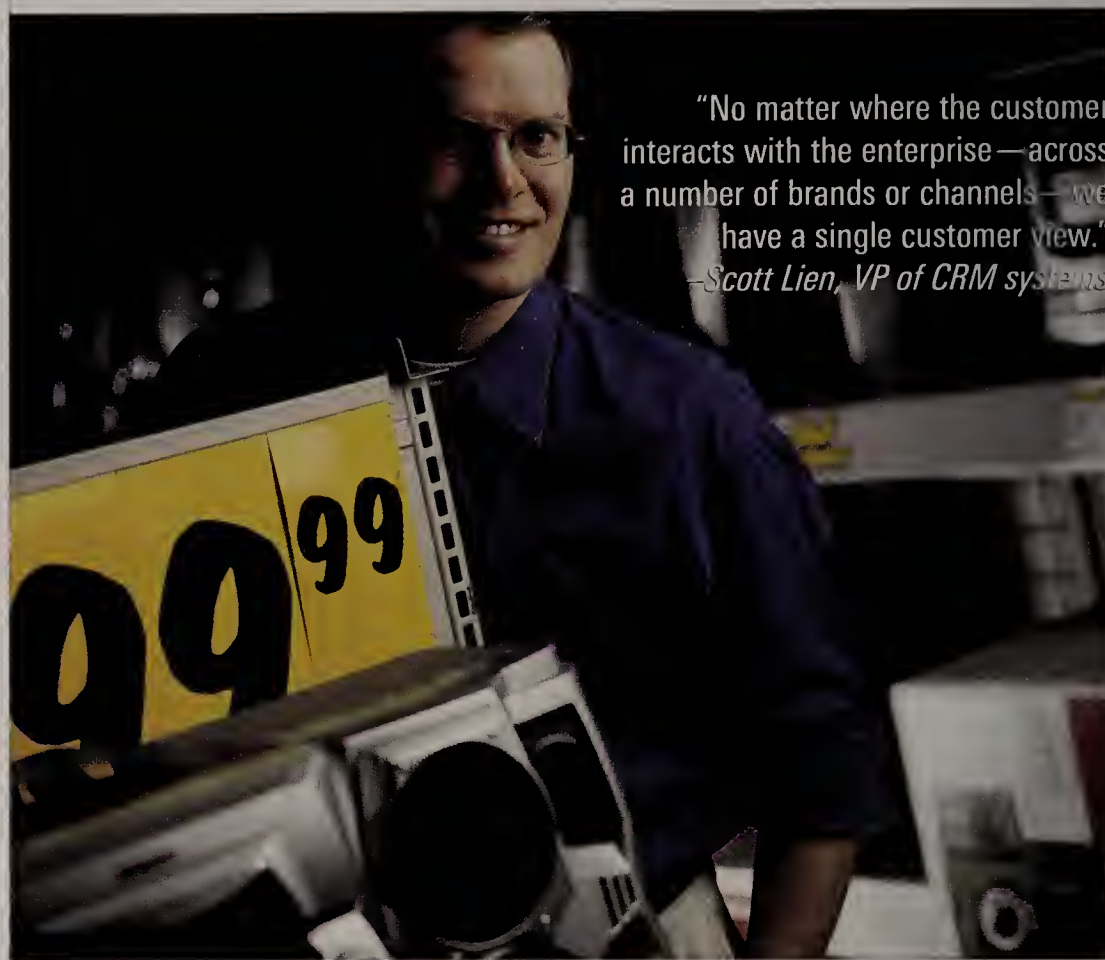
One way Best Buy predicts what customers want—and identifies opportunities to sell more—is by using software from Microstrategy to pinpoint "trigger events." For example, if someone buys a satellite dish but not the installation plan, the software, which regularly runs queries on the customer databases, will flag that purchase as a trigger event. After a two-week waiting period, the software transfers that information into a customer-service rep's queue. Bing! The rep calls the customer and says, "Hey, how'd that installation go?" If it didn't go well, the customer might be ready to buy the plan.

Taking the prediction game to the next level, the company is also working on pro-

jecting the lifetime value of its customers. The reason? If you can figure out who your best customers are likely to be, you can cozy up to them and make them even better customers by, for instance, encouraging them to buy something in another product category. And you can keep from wasting time and money on those who will never be profitable. The company remains tight-lipped about exactly how it's going about this, although executives will say that the effort involves a cadre of in-house PhDs and some serious math. But Roster warns that there's a delicate balance here: Focusing efforts on the most profitable customers may drive away those who are currently less profitable but could turn into big spenders someday. "Every retailer will always have the concern that the college students of today might be the good customers of tomorrow," Roster says.

The Best of Both Worlds

The company relaunched its website, www.bestbuy.com, in June 2000, transform-



"No matter where the customer interacts with the enterprise—across a number of brands or channels—we have a single customer view."
—Scott Lien, VP of CRM systems

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ing it from an unambitious site selling mostly CDs to a comprehensive source of product information that customers can access directly. As its online-only competitors falter, Best Buy is promoting its click-and-mortar synergy. Customers can order a product over the Web and then pick it up in the store the very next day to avoid shipping fees. In those halcyon dot-com days when venture capitalists routinely paid for free shipping, nobody thought twice about costs. "Shipping on a TV is hundreds of dollars," says Lien. "Somebody has to pay for that." Although it would cost that much to ship directly to the customer's home, Best Buy's well-developed logistics infrastructure allows the company to ship it from the warehouse to the store for pennies. By encouraging customers to combine all the Web has to offer—convenience, product information, easy ordering—with the cheapest mode of delivery, both sides win.

Best Buy is reluctant to specify how much it has invested in CRM technology and implementation so far. Lien puts it vaguely in the "tens of millions of dollars" and says the company expects to spend much more. The next outlay will be for

personalization technology, which analyzes customer or buying habits over the Web, predicts what people are likely to buy and then offers it to them.

According to Lien, data from customer-satisfaction surveys, improved profitability numbers and a higher response rate for its direct-marketing campaigns have con-

vinced the company that CRM investments are worthwhile.

Certainly Best Buy faces obstacles as it moves ahead with its CRM plans. But Roster, for one, thinks the company is on the right track. "If I were a retailer I'd be doing exactly what they're doing," he says. But he notes that as technology gets assimilated into the retail industry, what was once a differentiator is going to "become the price of admission to play in that space."

Of course, CRM technology and the customer data it makes available are only as good as the people who employ them. But if Best Buy can truly get its employees to tap into that wealth of customer information, it may be well on its way to delivering on the promise of small-town service. ■

Do you think IT can make big time feel small town? Send your opinions to Senior Editor Alice Dragoon at adragoon@darwinmag.com. Meg Mitchell Moore is a Boston-based freelance writer. She can be reached at megmmoore@earthlink.net.

Will It Work?

CRM seems straightforward enough. But don't underestimate the real-world challenges.

The long-term ROI on Best Buy's customer relationship management (CRM) investments will depend on its ability to clear some pretty tall hurdles. Barring magic, the high-school kid working the Saturday shift is not going to recognize a big spender walking through the door and treat him as such.

CRM technology probably won't help long lines, and it won't turn surly personnel friendly. And these days customers demand speedy lines and friendly personnel on top of low prices, convenience and tailored offers—especially when they're laying down \$399 for a Palm Pilot or \$2,400 for a notebook computer.

If Best Buy can't consistently provide great customer service, it will put a damper on relationship building, to say the least. Because the store offers so many products and freshens its inventory often, it'll be challenging for a part-time salesperson on an hourly wage to know everything. According to Mike Linton, senior vice president for strategic marketing, the stores do try to attract salespeople who are passionate about Best Buy's products, but that doesn't mean they can get them. As Gartner Dataquest's Jeff Roster points out, "You can have the best Super Bowl game plan ever, but if your players drop passes and miss blocks you are not going to win." —M. Moore

The Lingo

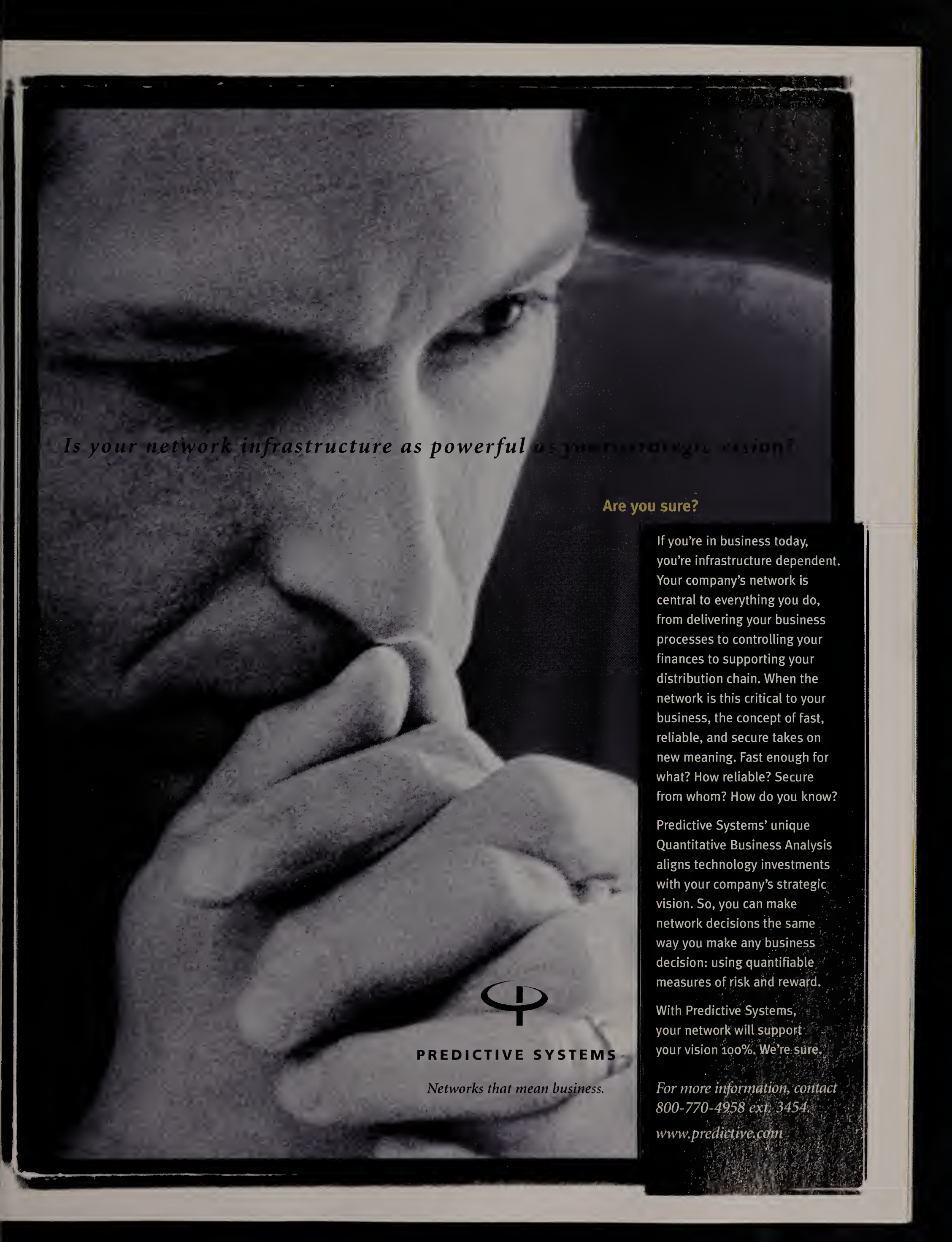
Customer relationship management (CRM) terms you need to know

Campaign management ♦ The use of customer information gleaned from databases or records of interactions to plan, target and manage promotions or offers.

Customer-centricity ♦ Basing business strategies on what customers are most likely to buy rather than on the particular products a company has to offer.

Lifetime value ♦ A calculation of how much a customer is expected to spend minus the estimated cost to acquire and keep that customer.

Personalization ♦ Web technology that analyzes customer buying habits or the habits of similar customers and predicts which products people are most likely to buy and when. Then it serves up appropriate offers over the Web.



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Do You Really Need A Customer Czar?

Here's how to figure out whether appointing a CHIEF CUSTOMER OFFICER makes sense for your company



EqualFooting.com CEO Jim Fox wanted a CCO from day one. CCO Angie Kim cofounded the company.

A FEW YEARS AGO, A VERY LARGE FINANCIAL INSTITUTION CHANGED its billing date from the 15th to the 30th of each month. Somehow, the company failed to tell both its customers and its own call center about the change in advance.

"Guess what?" says Jim Fox, who was then a McKinsey & Co. consultant and worked with the institution. "When people didn't get their bills, they started calling." Call-center representatives couldn't tell customers why they hadn't received their bills. Thousands of nervous callers tied up the lines, demanding that reps look up their balance. "Those were 10-minute calls," Fox marvels. "They cost about \$15 each."

Mindful of such snafus, when he and other McKinsey alums launched EqualFooting.com in 1999, they insisted on a chief customer officer (CCO) from the first time they sullied a whiteboard. "It was in the first business plan," says Fox, who is CEO of the Sterling, Va.,

BY STEVE ULFELDER

business-to-business exchange. A CCO would have prevented the financial institution's blunder, he says. "Any change in billing, that's a touch point—the CCO has to be consulted."

Now that customer relationship management (CRM) is on the tip of every CEO's tongue, some companies are appointing chief customer officers. Others, while reluctant to create a new board-level position, are creating such titles as vice president of customer experience and imbuing the position with sweeping power. Whatever the actual title, the new czar's job is to ensure that substantive decisions revolve around the customer. Some top execs can't imagine life without a CCO; skeptics contend that for many organizations, creating another seat at the boardroom table could very well be a recipe for disaster. Does your company need a CCO? Or is this a management fad you'll want to take a pass on?

Startups and Shakeups

Meta Group and Gartner, both in Stanford, Conn., predict steady if unspectacular growth for the new role. A Meta report projects that by 2003, 25 percent of all Global 2000 businesses will have a CCO or equivalent; Gartner says 15 percent of U.S. companies will have a customer czar by the end of 2003. Wendy Close, a Gartner research director, cites several drivers for the position's adoption: "Companies are becoming more customer-centric. And there's increased global competition and demand for new levels of customer satisfaction."

At Cisco Systems, Senior Vice President of Customer Advocacy Douglas Allred has held his position since 1991, making him one of the field's pioneers. Cisco's customer service, product design and IT groups report to Allred, who oversaw a shift in the company's compensation model that tied man-

agers' paychecks to customer satisfaction.

But so far, few large corporations have a CCO or similar position. While businesses' increased focus on the customer is undeniable, the customer czar position itself "is not yet real in the Fortune 1000," according to Frank Ingari, founder and chairman of Wheelhouse, a Burlington, Mass., marketing infrastructure services company. Today, most CCOs are found in startup companies.

Doubters suggest that while a CCO makes sense on a startup's clean-sheet-of-paper organization chart, attempting to retrofit a customer czar into a larger, established business may cause confusion about responsibilities. "Coordination of [sales, marketing and customer service] is already well done" by most companies, says Jerry McLaughlin, CEO of Foster City, Calif.-based Branders.com, an online provider of promotional items. "And if it's not, why would it be done well by someone called a CCO, but not by the COO?" The skeptics also fear the position could alienate executives—such as vice presidents of marketing and sales as well as CIOs—who view cus-

tomers' service as part of their own domains. They maintain that CCO is an inflated title cooked up in reaction to the latest management mantra of customer-centricity.

But even if CCOs are doomed to join chief knowledge officers and chief quality officers on the corporate scrap heap, is that sufficient reason not to appoint one? Some, including a few customer czars, say that while the title may have a limited life span, it is nevertheless needed to shake up the organization. "You had chief quality officers in the '70s and '80s," says Ingari. "They tended to be around for a while, then go away. That's not a bad thing." Like quality officers, who were charged with evangelizing a cause that never should have slipped off the radar screen but somehow did, perhaps the CCO is a valuable player, transitory by nature, whose top priority is to put himself out of a job as soon as possible.

The CCO's To-Do List

Because the role is so new, it is difficult to pin down the customer czar's responsibilities. Sometimes, the position seems defined



Douglas Allred, Cisco's customer czar: "If your customer satisfaction is decreasing, you're in a death spiral. Customer satisfaction equals customer loyalty."

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as much by what a CCO does not do as by what he does.

"I'm not the complaints department," says Lacey Roe, CCO at EarthLink, an Atlanta-based Internet service provider (ISP). Though it's intuitive to think of them as ombudsmen for the customer, CCOs insist this is not the case. "The ombudsman is taking complaints and running them up through the organization," Ingari says. "The CCO is advocating in top management, asking 'What should we do to make ourselves better?' It's proactive versus reactive."

"I'm opening channels for customers to communicate with us," says Ted Ucen, CCO at NuEdge Systems, a CRM software and services company based in Milwaukee. "We're not just waiting for customers to call." Ucen organized a customer interface SWAT team that literally sat behind users at 35 customer organizations and watched them work with NuEdge's software. The users "came up with great ideas," Ucen says. "We wrote them down and brought them back" to be designed into future releases.

Most customer czars are expressly not focused on customer acquisition—marketing's turf—but rather on existing customers. In June 2000, Roe became EarthLink's CCO after a merger with MindSpring that created the country's second-largest ISP. "The vision was, let's have someone [in senior management] who's not focused on getting new customers in the door," she says.

To some experts, the emergence of the CCO role is natural and inevitable, given the expense of acquiring new customers; hanging on to existing ones is a relative bargain. According to Patricia Seybold, CEO and founder of Boston-based Patricia Seybold Group and the author of *The Customer Revolution!* and *Customers.com*, "People who take seriously the challenge of customer-centricity realize that the big impediment isn't 'Do we know who our customers are?'

but 'How are we treating our customers? Does anybody have purview across business lines, channels and touch points?'"

Cisco's Allred says organizations that grasp the importance of customer satisfaction won't hesitate to name a customer czar. "If your customer satisfaction is decreasing, you're in a death spiral," Allred says. "Customer satisfaction equals customer loyalty. If you really understand that notion, you will systematize your organization around continually increasing that metric."

Allred speaks from experience. In the early 1990s, Cisco's internal surveys showed that customers were increasingly unhappy with the company's order fulfillment, which took 12 weeks on average. "Satisfaction dropped quarter after quarter, from 3.9 [on a scale of 1 to 5] to 3.3," Allred says. "Customers said they wanted orders in

three weeks. We knew we had to pull out all the stops to hit that."

So in 1993, Allred championed Cisco's decision to adopt a new Oracle ERP system in just eight months—about a quarter of the time most businesses then took to implement that system. The hurried schedule resulted in upheaval and some grumbling in Cisco's finance, manufacturing and customer service organizations, all of which had grown comfortable with the 12-week lead time. But according to Allred, customer satisfaction with fulfillment rose steadily once the system was in place and fulfillment time was slashed to three weeks or less; in its most recent quarter, he says, the company achieved a 4.3 satisfaction rating.

At EarthLink, which sometimes pays \$100 or more for a customer, Roe is also using proactive tactics to try to keep churn rates

Lacey Roe, CCO at EarthLink: "I'm not the complaints department."



PHOTO BY SCOTT JOLLIFF

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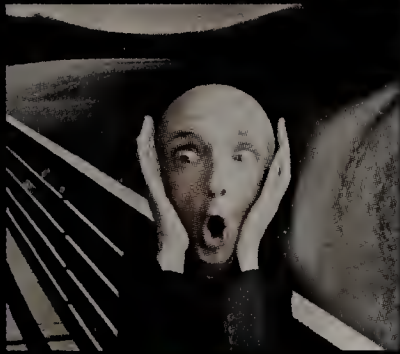
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Should You Appoint a CCO?

below 4 percent. (The industry average, she says, is closer to 8 percent.) In November, she revamped the retention services department to begin testing proactive customer assistance programs. The department now monitors customers' potentially unhappy experiences and calls them before they become disgruntled. For example, if retention services notices a customer is using a suboptimal dial-up number and thus is sometimes having trouble gaining Internet access, that customer gets an unsolicited call with advice on solving the problem.

This type of program might not find traction in a company without a CCO, because technically, the customer is not yet unhappy—and therefore is nobody's problem. "They're not complaining, but we know they're having trouble," Roe says. "We say let's spend a little money, make sure they're happy." Roe says this program and others have shown "a 20 to 25 percent reduction in churn in targeted test results."

Does CCO Mean "Cuckoo"?

To be effective, CCOs must tackle the formidable tasks of eliminating functional silos and coordinating departments that may be only tangentially aware of each other's activities. "A lot [of the job] is consensus building, training, major change management," Seybold says. "This is not easy."

"You have to manage the cross-functional nature of the position," says NuEdge Systems' Uezen. "It doesn't fit neatly anywhere." Liz Shahnam, vice president and director of the CRM Infusion Program at the Meta Group, notes that CCOs "aren't functionally responsible for most of the domains they need to influence—CRM, sales, service, marketing." She says that all these dotted-line relationships have led some executives to joke that CCO stands for "cuckoo."

Customer czars also find themselves

influencing the selection of customer-facing technologies—and most have backgrounds in marketing or business consulting, not IT. However, "people with this job are not technology-shy," Seybold says. "They learn what they need to know. The important thing for a CCO is using technology to improve the customer experience." Roe says that while she is ultimately responsible for EarthLink's CRM initiative, "we rely on IT for the nuts and bolts. We say, 'Here's what we want to do. Can you help us find the system that works best?'"

Similarly, Angie Kim, CCO and co-founder of EqualFooting.com, drove the company's strategic decision not to outsource customer service. "Those people talk every day with our customers," she says of the company's customer service reps. "We wanted to keep that in-house." Then Kim worked with IT to create the customer service center.

Do You Need Another "O"?

So, does your organization need a CCO? The answer depends on your company's size, age, present management structure, market and risk tolerance. At a large, established corporation, appointing a customer

czar—and imbuing that person with the power needed to get the job done—is likely to shake the organization to its very foundation. This helps explain why most of today's CCOs are found at young businesses, which have the luxury of building their management structure from the ground up. Exceptions to this rule include Cisco's Allred and Alex Sozonoff, who was appointed vice president of customer advocacy at Hewlett-Packard in 1998. But within the technology industry, noted for its early adoption of new ideas, Allred and Sozonoff are in good company. Although analysts say they expect customer czars to catch on in such fields as retail and hospitality, for now most CCOs are clustered in the technology sector.

Vast, complex organizations such as General Motors or Procter & Gamble are less likely to have a single CCO because the sheer number of customer touch points would likely be too much for one person to handle. A Gartner report on the CCO phenomenon notes that "some enterprises may find that it takes multiple individuals to fulfill all of the necessary roles," adding that organizations may choose to spread the duties around. The report also concludes that "there may not be a need to implement

A CCO IS A GOOD IDEA IF:

- Your customer satisfaction ratings are plummeting and the situation requires desperate measures.
- Your business is reasonably free of silos and frequently uses cross-functional teams.
- Your CEO is willing to throw all her weight behind the customer czar's cause.

A CCO IS A BAD IDEA IF:

- You're not willing to give a CCO sweeping powers, such as the freedom to tie compensation to customer satisfaction.
- You've already got a senior executive who's a passionate proponent of customer-centricity.
- You had a chief knowledge officer for about six months in 1996 and nobody knew what the heck he did.

—S. Ulfelder

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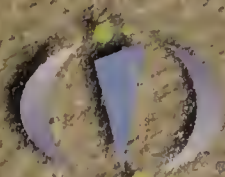
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[a CCO], depending on the structure of the business or the quality of client communications." In other words, a company with great customer satisfaction ratings whose customer-facing operations are perking along simply may not need a customer czar.

Broker Charles Schwab is often cited for its customer focus, yet the company consciously decided against naming a CCO in favor of a team approach. "We don't want to name just one czar," says Kathy Yeu, Schwab's vice president for retail service quality. "Everyone is responsible." Rather than a single CCO, Schwab has a customer quality assurance committee made up of board members, including co-CEOs Charles Schwab and David Pottruck. Don't look for Schwab to name a CCO anytime soon. "I think Chuck Schwab sees himself as the customer czar," Yeu says.

For now, plenty of good seats remain on the CCO bandwagon. A Meta Group report from January 2000 concedes, "We do not currently find a dramatic uptake on this new CCO role, due to the tremendous degree of organizational change it requires." Which is not to say the feat is impossible. According to Seybold, who wrote a case study on Hewlett-Packard for *The Customer Revolution!*, when CEO Carly Fiorina took the reins at the \$48.8 billion company in July of 1999, "she realized the product-centric organization was driving [customers] nuts."

Seybold says that on reorganizing Hewlett-Packard into two customer-facing entities—one for businesses and one for consumers—Fiorina appointed a vice president of total customer experience in each organization. Sozonoff, who remains vice president of customer advocacy for all of HP, is responsible for the commercial group; another vice president oversees total customer experience for consumers. The

executives wield broad power. For example, according to Seybold, a new metric helps determine Hewlett-Packard executives' compensation; in addition to profit and revenue growth, paychecks are now tied to customer satisfaction and loyalty.

What CCOs Need to Succeed

If you do name a CCO, what must you do to give that person an honest shot at success? Here at least, practitioners and experts unanimously agree on one thing: A customer czar needs the full backing of the organization's chief executive officer. Lynn Wright says that her boss's support "was vital" in her first CCO stint at the former Mustang.com. "[Other officers] didn't understand what I was doing—but they understood I had that backing."

NuEdge Systems' Uezen agrees: "If you just throw the position out there, you're going to fail. You need to have the CEO step up and explain why it's needed." As Meta Group's Shahnam puts it, "You need to report to the CEO, because that's the only hammer you're going to have."

If you're creating a new CCO position in an existing company, Seybold recommends looking for someone within the organization. "That person has to have huge credibility," she says. "They need to have earned their stripes and people's respect. They have to have delivered value in the past." She says CCOs will draw on this credibility to implement the changes required to build a more customer-centric culture. Without that clout, Cisco's Allred might have had trouble mandating the

"The challenge of customer-centricity isn't 'Do we know who our customers are?' but 'How are we treating our customers? Does anybody have purview across business lines, channels and touch points?'"

—Patricia Seybold, CEO of the Patricia Seybold Group

link between managers' pay and customer satisfaction.

"We hold every manager accountable for two things: financial results and customer satisfaction increases year over year," Allred says.

Credibility will also help in any turf wars that arise. "Typically in the CXO ranks, officers compete with each other," Gartner's Close says. "Are those officers going to back up the hiring of a customer czar? I just talked to a CEO who thought customer-relations issues belonged under him."

Regardless of your business's size or market, the most important factor in deciding whether you need a customer czar is risk tolerance. At an established company, a properly chartered CCO will make both waves and enemies while cutting a swath across traditional fiefdoms. Appointing a customer czar is a high-risk strategy. How radical a change do you need? If your customer satisfaction ratings are in decent shape, but say, your call center needs some attention, you can get by with less drastic measures. If, on the other hand, most of your customer-facing operations are in tatters, maybe it's time to blow things up. As Wheelhouse's Ingari says, "CCO is a job that comes with a fuse." That's true for employee and employer alike. ■

Do you think the CCO position has a future? E-mail Senior Editor Alice Dragoon at adragoon@darwinmag.com. Steve Ulfelder, a regular contributor to *Darwin*, also writes about technology and management for *The Boston Globe* and *Computerworld*. Contact him at sulfelder@charter.net.



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Six Days to a Higher I.Q.

At Wharton's weeklong class on e-commerce, count on 12-hour days, plenty of homework and, thank goodness, rack of lamb

by Todd Datz

I FINALLY RUN OUT OF EXCUSES ON A WINTRY SATURDAY AFTERNOON. AFTER PROcrastinating for the better part of a month, it's time to tackle the countertop full of case studies, journal articles and academic papers. I have a quick flashback to college: the last-minute cram, the coffee-fueled all-nighter. I'm too old for this stuff, I think. So why am I still reading at midnight the day before I leave? Because it *is* college once again. ■ I'm off to an e-commerce strategy course at UPenn's Wharton School of Business's Aresty Institute of Executive Education to see what tempts busy business executives to plunk down \$8,500 for a grueling week of study. Are they hoping to learn, at warp speed, what e-commerce is all about? Do they expect reassurances that their companies' strategies are on the right track? Have they been appointed head of their companies' e-commerce initiatives with minimal experience in IT? Can a five-day program really make a difference? The latter question particularly piques my interest.



Do We Really Have to Work Through Dinner?

2:25pm I arrive at the Philadelphia campus on an atypically warm Sunday afternoon. After checking in, I head to my new digs. The room decor is standard academic issue—desk, bed, thinly upholstered chair. Think Motel 6 but with a networked computer.

3:30pm After registration and some brief mingling around the coffee jugs, my classmates and I make our way to the introductory session. Our classroom looks like most B-school auditoriums: The raised seating provides great sight lines but little room to hide from the professor's gimlet eyes. Awaiting us is a thick binder, which will soon groan with the week's handouts. A glance at the attendee list warms my heart—I had hoped for a good chunk of the 60-some-odd class to be non-IT execs, and indeed it is. There are CEOs, presidents, VPs of marketing and sales, and various heads of e-business. There is also a sizable international representation, including managers from such far-off points as Saudi Arabia, India and Japan. Genderwise, I count nine women.

Harbir Singh, chair of the management department at Wharton and one of the academic directors of the program, kicks off the day with a two-hour overview. "We know there's a lot of experience in the room. Half of the learning will be classroom, and half

sents a quick tour of the Internet economy. My head spins as he goes through a raft of graphs and charts detailing global Internet usage, site visitor rankings and various Net-related revenue numbers.

7:10pm The first two sessions were OK, but I really fall in love with Wharton in the dinner buffet line. We're treated to sea bass, roasted potatoes and mixed greens. I head back to the classroom with my tray, energized by the thought of a week of such fare.

As we shovel the haute cuisine into our travel-weary bodies, G. Anandalingam, national center professor of resource and technology management, offers a quick low-down on the alphabet soup of networks (ATM, DWDM, FDDI, LAN), a primer on

their legacy systems with application service provider platforms—may well be the new new thing in the e-infrastructure space.

8:30pm Back to my dorm room to review 63 pages of case studies on Capital One, Dell and VerticalNet. I tiredly jot down answers to the accompanying questions and dread the possibility of being asked to dissect any of the cases' financial statements. Asking a journalist about amortization is like asking a dog to explain supernovas.

After spending three hours on the case studies and answering e-mail from the office, I collapse in front of a *Simpsons* rerun.



I Forget to Go Outside

8:00am I start the day, as I will every day this week, by meeting with my assigned group to review the day's case studies and readings. There's Matt, a Texas banker; Anna, an IS manager from Singapore; Luis, an IT manager from Venezuela; Chip, a VP of business development from North Carolina; Aki, a sales director from Japan; and G.P., a general manager from India. Waiting desperately for the espresso roast from breakfast to kick in, we collectively hammer out our answers to the case study questions.

When no one volunteers to be the team spokesperson, we appoint Chip, who appears less than excited.

9:00am Time for the first case study: Dell online. Professor Singh sparks discussion of Dell's magnif-

As we shovel HAUTE CUISINE into our travel-weary bodies, we get the lowdown on the alphabet soup of NETWORKS.

icent supply chain and top-notch customer service, as well as some of its challenges. (Does the PC powerhouse depend too much on founder Michael Dell?) I slouch down into my chair as Singh asks a couple of people to present their groups' answers.

how the Internet works, a framework for e-business and an intro to Internet distributed services (IDS). According to Anandalingam (and a prereading research paper from Merrill Lynch), IDS—hardware and software that will help businesses integrate

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10:45am The competitive strategy lecture covers what makes this whole e-business thing so tough: tension between speed and vision and the difficulty of managing trade-offs. How *do* you reconcile a consistent product line with the need for market agility?

2:30pm Following lunch and another small-group meeting, it's case study time again: Cap One and VerticalNet. David Croson, an assistant professor of operations and information management, gets a lively discussion going. Cap One uses IT superbly to pick off profitable customers from its credit card competitors. Can it do the same with other industries? Will VerticalNet's first-mover advantage sustain its 50-odd B2B trade communities? Or will second- and third-movers pick off subsets of its business piece by piece? I sit up straighter in my seat and even raise my hand a few times.

6:20pm I polish off a hefty portion of rack of lamb. No need to head out for a cheese steak if this fare keeps up.

11:15pm As I finish up tomorrow's readings and quaff my last sip of locally brewed ale from the upstairs pub, I realize that I haven't stepped foot outside the building since I arrived.

Wake Up and Smell the Diesel Fumes

9:05am After the daily group meeting, we file into class to hear Eric Clemons, professor of operations and information management and one of the program's academic directors. He has the folksy sageness of a college professor with requisite suit, bow tie and salt-and-pepper beard. His lecture touches on channel power and electronic consumer interaction, interspersed with humorous anecdotes about negotiating airline and hotel upgrades from Hawaii to Hong Kong.

10:55am Another Clemons class focuses on scenario analysis—predicting a range of possible future scenarios, then deciding which should have priority when it comes to technology spending for e-commerce. How aggressively should an airline build its IT infrastructure to sell tickets directly to consumers? Will they come in flocks? Will travel agencies undertake punitive actions? My classmates busily scribble notes during this lecture; the topic seems to strike a collective chord. (See "Locker Talk" on www.darwinmag.com/printlinks.)

12:10pm My plans for a walk outside are foiled by a working lunch. It's now been nearly 48 hours since I've smelled diesel fumes.

12:30pm Peter Fader, associate professor of marketing, tells us he doesn't believe half the stuff we've heard in class so far. That may not elicit cheers from the folks who've invested a week of their lives in the class, but his boldness is refreshing. Among other subjects, Fader researches online visiting and purchasing behavior. His theories are eye-opening: Cross-selling doesn't make sense; viral marketing is garbage. Those aren't the uninformed rantings of an e-commerce contrarian; he happily shows us data to back up his claims.

2:20pm-8:30pm Afternoon and evening classes cover strategic alliances and supply chains. After the day's last class, I finally make it outside. Ah, fresh air! I visit the university bookstore in search of gifts for the kids; a \$20 price tag on a UPenn baby T-shirt nixes that idea.

12:05am After a couple of hours of reading and Web surfing on the room computer, I doze off, my mind awash in fixed costs, creative pricing and returns to scale.

What the Heck Is B2X Anyway?

8:00am Our group makes vain attempts to focus on today's assignments, but our conversations turn to the price of online books. Luis whips out his camera and snaps a few digital pictures of us for posterity.

9:00am-12:15pm In two classes, Hitt takes us through Internet valuation and strategies for pricing information goods. We get some basics in finance (P/E ratios, multiplier effects), view lots of statistics and try to figure out when it makes sense to bundle information goods (for example, sell software packages X, Y and Z for price P).

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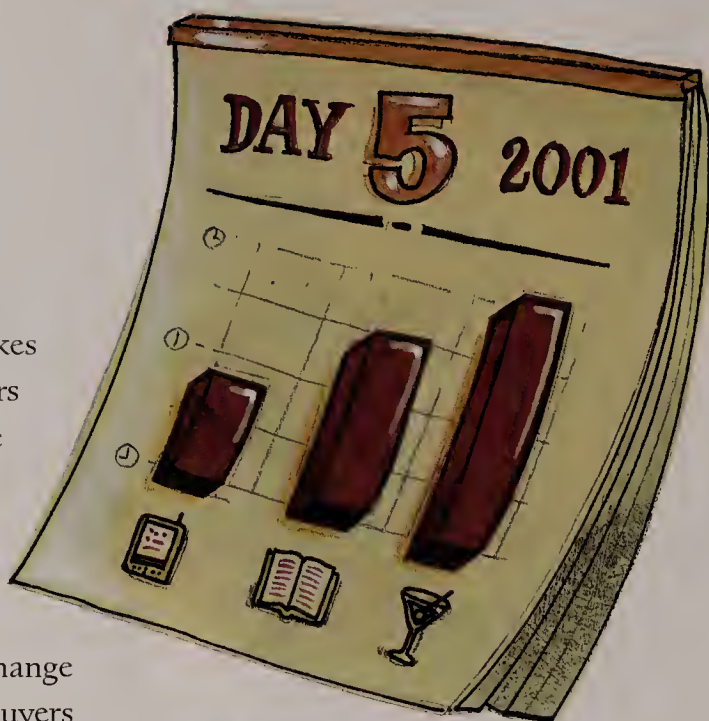


1:35pm-4:30pm Clemons takes over after lunch and delivers three hours of e-marketplaces and e-commerce structures—C2C, B2C, B2B, B2X (business to exchange) and pseudo-B2X (too hard to explain here). We delve into questions such as, When will a company find an exchange valuable? (in an industry with many buyers and sellers who differ in how they value a product); When is a tight channel between buyer and supplier best? (when a buyer needs tightly scheduled deliveries to achieve production efficiencies and the industry has a small number of buyers and sellers).

4:45pm Ravi Aron, assistant professor of operations and information management, explores the Big Brother aspects of the Web: dynamic pricing, search engines and search agents. Bottom line: Companies are getting very, very good at watching your every online move. Example: Even if you disable your PC's cookies (cookies are bits of software that allow websites to gather data about your surfing habits), you can still be tracked by your computer's IP address. Before you know it, websites will know how many teeth you flossed last night.

6:30pm Our hosts serve up Asian-influenced duck with red curry sauce, bok choy and rice for dinner's vittles. The cheese steak is still on hold.

10:10pm After digesting the day's e-mails, my bloodshot eyes attempt to focus on tomorrow's readings: e-commerce scenarios (yet again) and case studies on Charles Schwab and eBay. My class preparation has worsened as the week drags on, mainly because I no longer fear getting called on. But I dutifully slog on.



Regulations, Leadership and Fried Rice

9:00am Professor Dan Hunter, assistant professor of legal studies, bangs out a lecture on e-commerce regulation. A strapping Australian with a fairly thick lilt, it takes me a few minutes to adjust to his speak. In the first few minutes, I'm writing "Jewish diction" and "Yahu Franz" in my notepad, totally confused, until I realize he's talking about *jurisdiction* and a recent court battle involving Yahoo France. There's lots of interesting legal stuff going on in the online world. For example, is a content provider responsible if content that's illegal in France is routed from the United States to Spain, through France? Can countries that transactions are routed through tax those transactions? (It hasn't happened yet, but apparently China is exploring the possibility.) Can companies—say, Wal-Mart—stop people from registering URLs like www.walmartsucks.com? (Hunter tends to think not.)

10:50am-6:45pm Lectures by Aron (One nugget: Electronic auctions are a great way to make sure you don't underprice your product when there's varying demand for that product) and Clemons (more on e-commerce scenarios) follow. Mike Useem, professor of management and director of the Center for Leadership and Change Management, then takes us through our final case studies, involving Meg Whitman at eBay and

David Pottruck at Charles Schwab. Thank God. My brain is tapped.

6:50pm A cocktail reception kicks off the evening. There's no homework, so we're all relaxed, introducing ourselves to classmates we haven't yet met and trading business cards like 7-year-olds swap Pokemon cards.

8:10pm Aki, my group member from Japan, and I decide to head downtown for dinner at Susanna Foo's, a well-regarded Chinese restaurant. Over steaming plates of fried rice and Hunan chicken, we chat about the program, share family stories and agree to stay in touch.

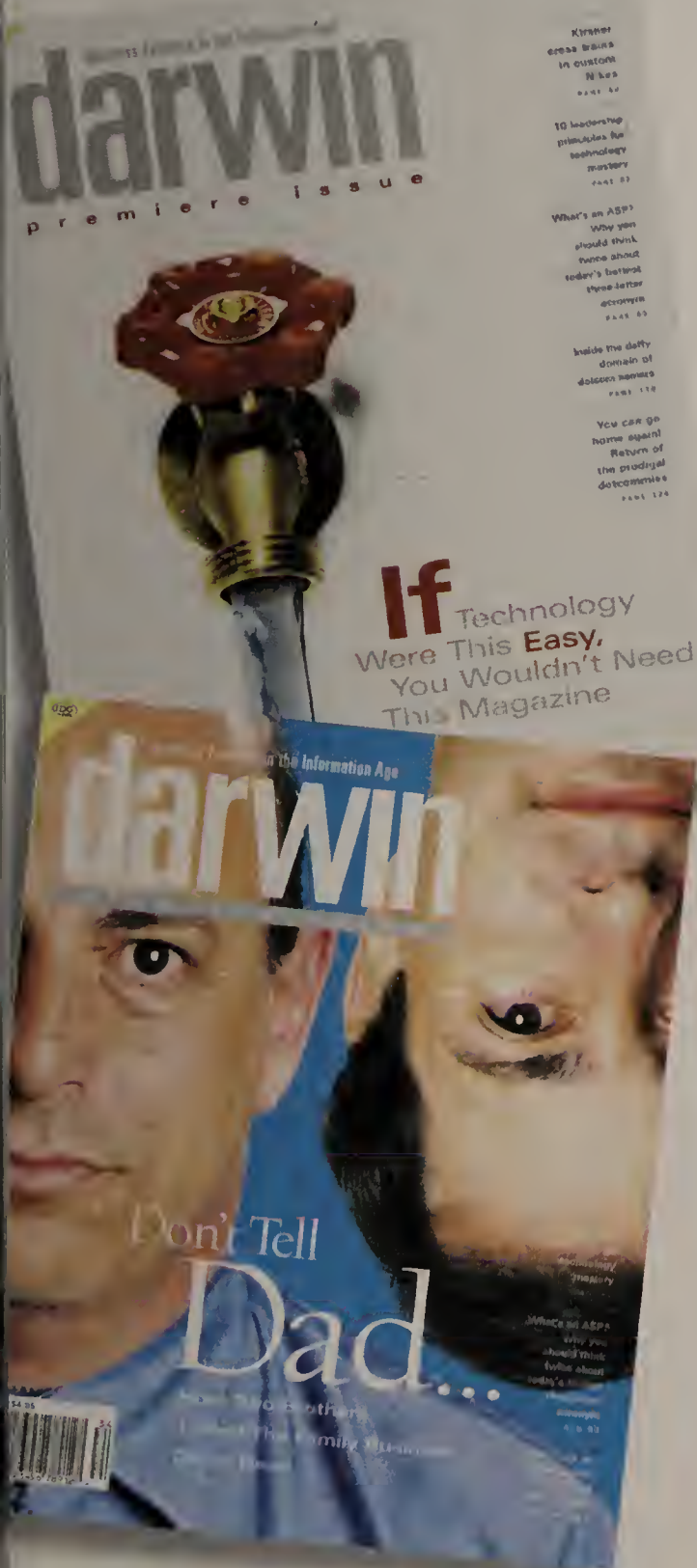
Back to E-Business Reality

9:00am-12:00pm In his good-bye summary, Singh gives us one final thought: If you can control your e-business initiatives, perhaps you're not driving fast enough.

1:00pm I hop a cab to the airport, accompanied by a classmate headed back to Kansas. We wonder if a week in academia will translate into action at the office. Back at their offices, our classmates will try to put their newfound education to work amid the harsh realities of business. They could run afoul of an executive board that can't decide how to measure e-business initiatives; they may face a CEO who wants to cut down on technology spending. The entire group will have to deal with projects amid rapidly changing technologies and business conditions. Scary stuff for these executives, yes, but also a thrill a minute. What could be more fun than that? ■

Senior Editor Todd Datz would love to hear your e-business war stories. You can reach him at tdatz@darwinmag.com.

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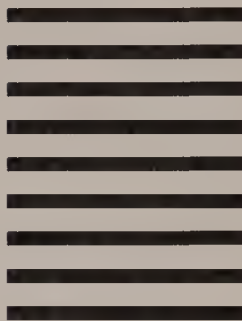
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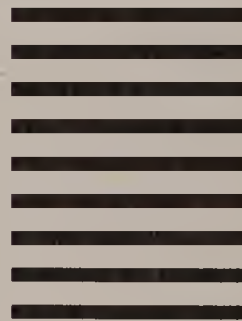
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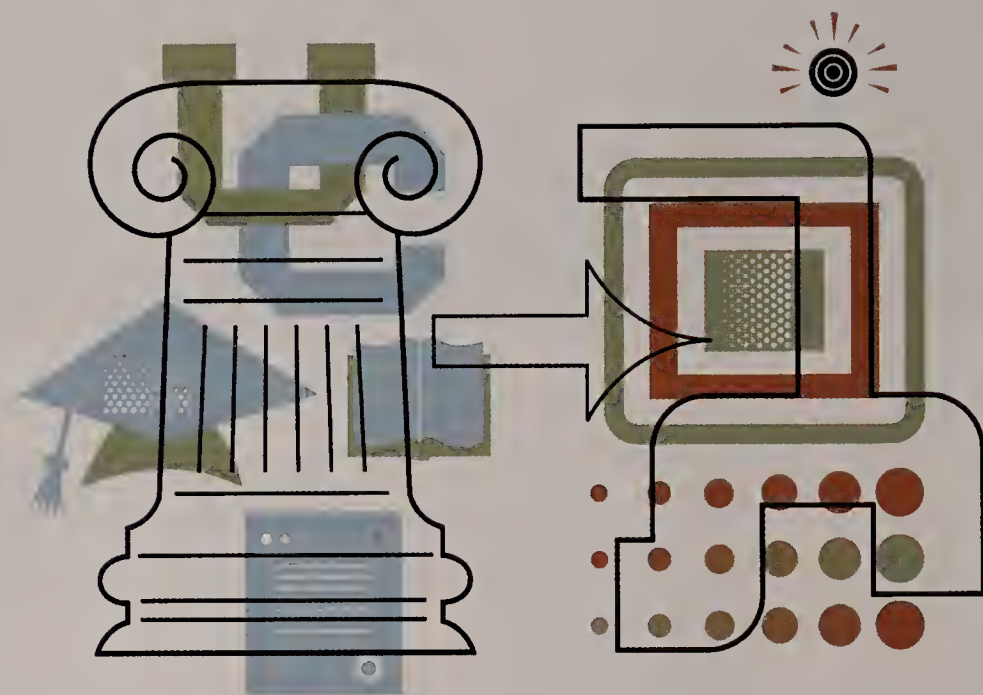


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STREET GUIDE TO ESSENTIAL WEBSITES AND STRATEGIES

Edited by Todd Datz



Here's Help for Application Anxiety

UNIVERSITY AID Anyone whose college diploma has taken on an odd yellowish color may have forgotten how arduous the application process can be. But high school students (and their parents) can wearily iterate the steps: Get the applications. Write the essays. Wait for the responses. Decide where to go. And figure out how to pay for it.

Now a company that's always been willing to proffer help for the last item is addressing the others. Loan giant Sallie Mae has stepped into the college preparation arena with an online college aid service. Wiredscholar.com, which was launched in April 2000, provides students and parents with help in all the major areas of the college application process. Its features include a database of colleges organized by state, an application time line and interview tips. Anyone can access Wiredscholar.com, but students who register with the site (it's free) can save results (payment calculations, for example) on the password-protected site.

Sallie Mae hopes the site will cultivate loyal customers. "If we're able to help this audience solve problems and eliminate anxiety, we hope that eventually they'll look to us when they decide to finance," says **David Cooper**, managing director of marketing and business development at Wiredscholar.com. He says it's still too early to tell if the site is achieving those goals, but Sallie Mae has done its homework and is hoping for good marks from its customers.

—Meg Mitchell Moore

web guide

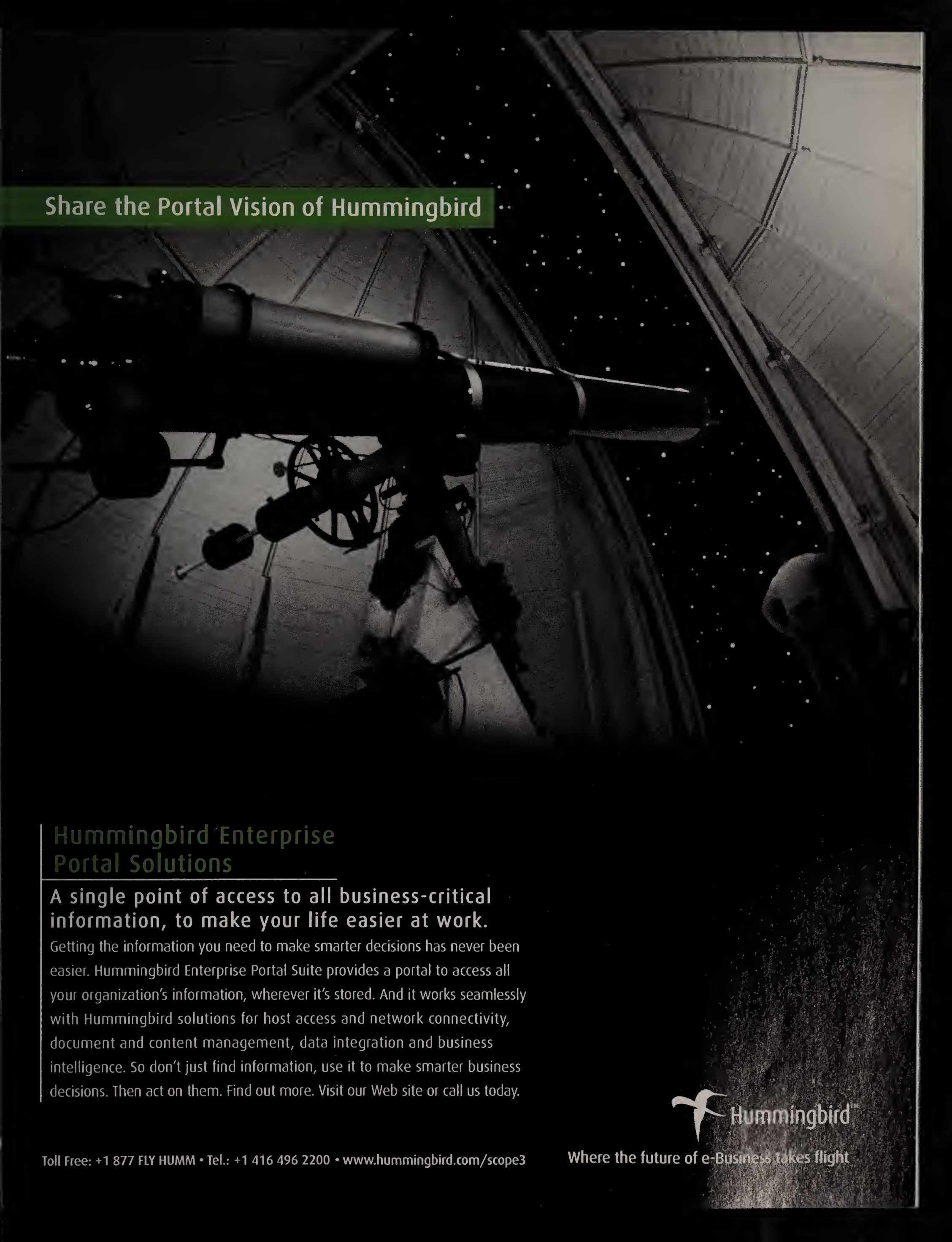
Security

We've got news for you: Hackers are out there, trying to weasel their way into your networks, maybe even as you read this. The number of Internet abusers and the frequency of the damage they do, such as website defacements, viruses and random poking around, are rising all the time, according to TruSecure Corp., a Reston, Va., security company that tracks such data. And the damage hackers do is real. Fortune 1000 companies lost more than \$45 billion in trade secrets in 1999 because of hacking, according to the American Society for Industrial Security. And no one's immune. Even computing overlord Microsoft fell prey to attacks that downed some of its websites on and off for three days earlier this year.

Learn how to protect your company and find out how hackers operate by checking out the following websites.

www.antionline.com

Antionline aims to help readers stay abreast of what hackers are doing. Its articles teach readers how to understand hacker jargon, recognize when they're being hacked and track down the perpetrators. It posts security-related stories, mainly about hacks of prominent companies, from magazines and newspapers daily.



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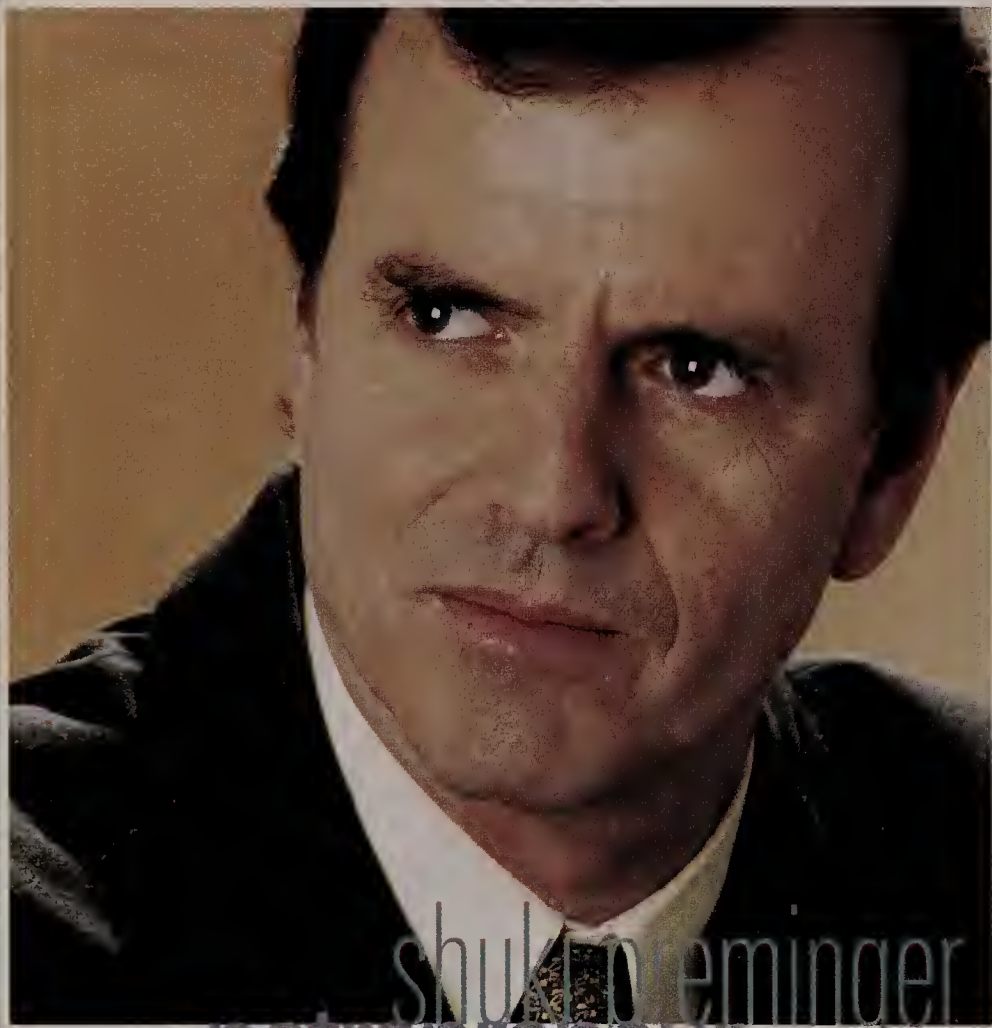


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Where the future of e-Business takes flight

Define and Conquer

LANGUAGE HELPER People are talking about Babylon.com. At least that's how former CEO **Shuki Preminger** explains the 25,000 new users who register each day for the Israel-based dictionary and translation service that has never spent a dollar (or an Israeli shekel, for that matter) on advertising. Preminger, who remains on the board



shuki preminger
netrepreneur

of directors, says Babylon owes its 10 million user base to viral marketing—that Internet phenomenon named for its infectious mode of travel.

As a friend-of-a-cousin-of-a-coworker may have told you, Babylon's software lets users click on a word on their computer screen to retrieve a definition or translation. Here's how it works: Jane User downloads the software from Babylon.com and decides which dictionaries she'd like to use. (The service is free with ads, \$19.95 without.) The next time Jane reads an article in, say, Spanish and gets stumped by the word *ayuda*, she clicks on the word and the definition—*help*—pops up. The software even converts currencies. Preminger quit his job in 1995 to help start Babylon. Today, the software supports more than a dozen languages, and users can also build their own glossaries. For example, a purchasing department could create a glossary of catalog numbers so that employees could click on a catalog number in a spreadsheet to bring up the item's description.

He's mum on the numbers, but Preminger says that about 50 percent of Babylon's revenue comes from companies that either build glossaries or purchase licenses after realizing how many employees have downloaded the software on their own. The other half of the revenue is split between consumer subscription fees and ad revenue. Even as he struggles to turn a profit by the end of 2001, Preminger scoffs at the "harsh reality" faced by flailing dot-coms. "Old economy, new economy, those are all buzzwords," he says. "Over the long haul, you have to increase your revenues and deliver profits. It's been like that for years and will continue to be like that."

—Sarah D. Scalet

web guide ...Security

One of Antionline's highlights is an archive of websites that have been hacked, with pictures of their defaced version. Warning: Don't open these pages if you're in a busy office. Most are riddled with profanity.

Another feature not to be missed is Ask Bub, an online database full of prewritten answers to commonly asked security questions. If you want to know what a worm is, for example, but don't want to ask a potentially condescending technophile, you can anonymously ask Bub.

www.sans.org

Don't let the maze of links on this site—the homepage for the System Administration, Networking and Security Institute, an organization of security professionals from government, business and academia—scare you away. If you devote a little time, you'll find a plethora of information about security issues, organizations, conferences, projects and training programs.

Look under Security Digests for links to articles from the mainstream media about security breaches. Under Resources you'll find articles with titles such as "Mistakes People Make that Lead to Security Breaches" and "Model Security Policies."

netsecurity.about.com

This About.com guide explains how

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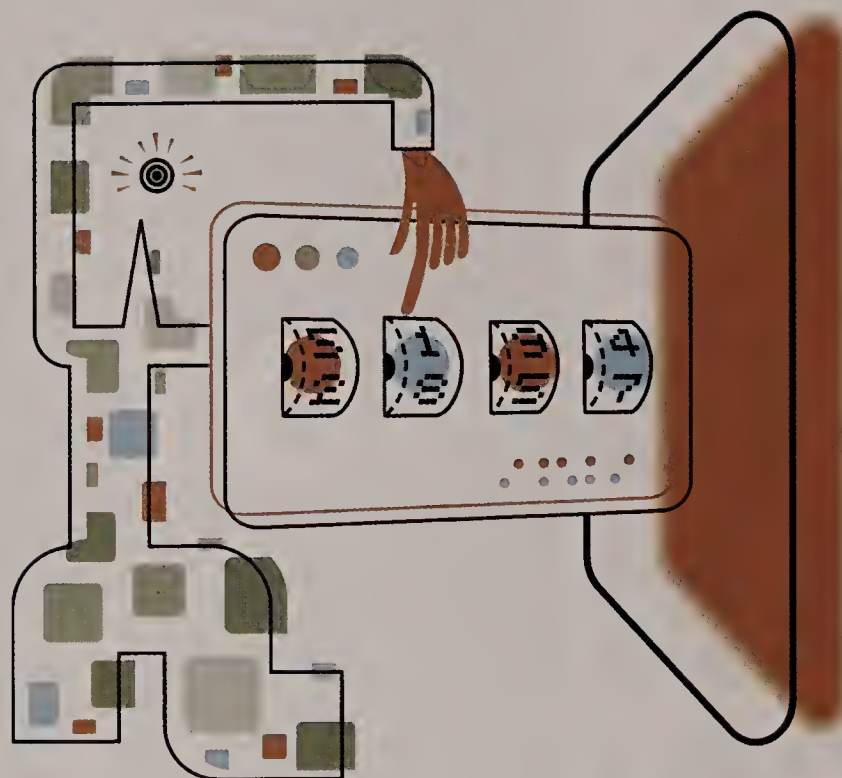
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Scrambling to Improve Online Security

PAYMENT TECHNOLOGY What do you get when you mix a mathematician, a software engineer, a wicked storm and the Internet? If you're **Ian Flitcroft** and **Graham O'Donnell**, you get Orbiscom, a 4-year-old software company that hopes to give online shoppers—and e-tailers—a little peace of mind.

The Irish brothers-in-law were on a sailing trip in 1997 when heavy rain forced them to head for dry land. Waiting out the storm in their boat, off the southwest coast of the Emerald Isle, the conversation drifted to work.

O'Donnell, the engineer, told Flitcroft that for e-commerce to take off, consumers would have to feel more comfortable shopping online. Flitcroft, the mathematician, proposed developing a type of credit card that uses different numbers for each transaction. O'Donnell suggested an additional feature—letting shoppers restrict each of those numbers to a specific merchant or amount.

Eager to turn their ideas into reality, Flitcroft and O'Donnell set up shop in Dublin, Ireland. They created a tool that generates temporary numbers, dubbed O numbers. In 1999, they signed their first client, Allied Irish Bank, and soon after moved their operation to New York City. They hit the jackpot last year when they snagged MBNA and Discover Financial Services, which each has approximately 50 million cardholders.

To use O numbers, cardholders download an interface that connects them to the credit card issuer's O card software. When they're ready to shop, cardholders simply open the interface, request a number and say how much can be charged with it. Then they receive a number they can use to shop on any website, and the merchant verifies it without knowing it is temporary. Orbiscom makes money by charging issuers to install and maintain the O card software, and also takes a percentage of each transaction.

Alternate payments have seen a slow acceptance. "The risk of failure for new payment services is huge," says **James Van Dyke**, a senior analyst at New York City-based Jupiter Research. None of the other alternate payment technologies, such as tools that let users e-mail money and credit card readers that connect to PCs, have taken off. "If Orbiscom can change payment behavior," Van Dyke says, "the implications are massive, like inventing a new kind of air."

—Emelie Rutherford

web guide ...Security

to secure a network. Its author, Jim Williams, writes a column that describes the many ways hackers can slither into your seemingly impenetrable systems. His more referential articles explain how things like firewalls and tools that hackers use actually work. He also gives advice on more ambiguous problems like how to deal with a cyberstalker.

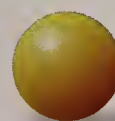
To find out how to secure a home network, check out Williams's *Network Security Tutorial*. (You can find it by searching the guide.) In it he covers all the major aspects of Internet and network security—risk assessment, vulnerability, budget analysis, security policy, implementation and auditing—for all kinds of networks, including those you set up yourself.

Don't miss the site's discussion board and real-time chat room. Williams moderates both and practically begs users to ask questions.

—Emelie Rutherford



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Truth or Consequences

How do you know if a vendor will deliver on its promise? When checking references, you'd better ask the right questions, or you might end up with the wrong solution.



YOU SAY YOU'VE NARROWED YOUR LIST OF VENDORS, and now you're ready to make some decisions? No one knows better than you: You've made a significant investment in time and money—for starters—and have a lot on the line. How can you better ensure the success of the project?

Checking vendor references is one critical step toward making a final decision. But remember: Not every reference is reliable.

Salespeople wouldn't knowingly give you a reference that would say something negative about them. Beyond that, sometimes vendors give discounts to companies that agree to be a reference, which jeopardizes the unbiased opinion of the vendor and solution you seek. Consequently, you should automatically be skeptical of any testimonial. If you look at the client lists from several

competing software vendors, you'll probably see an overlap. That's because different divisions use different products. Ask the salesperson why the rest of the company hasn't bought the software you're considering.

Ask for references that closely match your situation. If you are going to have 1,000 users on your system, try to avoid talking to a reference with only 20. If the vendor doesn't have references that have requirements similar to yours, it isn't necessarily a bad sign. You just need to be aware of that to make an informed decision.

When you contact the reference, ask for the person who was responsible for choosing the system and the person who maintains it; they may be different people. You need to make these distinctions because the reference may be a manager who had little to do with the actual decision-making process. Also, be sure to talk to the users; they will be more open to discussing the system's problems.

If possible, make an onsite visit to the recommended company, especially if the system is critical to your business and you're making a substantial investment. It's best to see the software as it's being used. Even better, ask the user to give you a demonstration of the software. In addition to calling references, contact writers from your industry's trade publications and ask them about the vendor. Many have written product reviews and will gladly share the information with you.

Anyone who's been asked to recommend a product wants to help the prospective customer. Trust that most references won't want to see you make a mistake. They'll tell you what you need to know if you ask the right questions. Here is a list of questions to ask references before you make a purchasing decision:

■ Are you still using the system? And if not, why not? This should be your first question because the reference might not be using the system. You need to know why. Although a salesperson will usually make sure that the reference is using the system before recommending you contact the company, you should still ask this question. You never know.

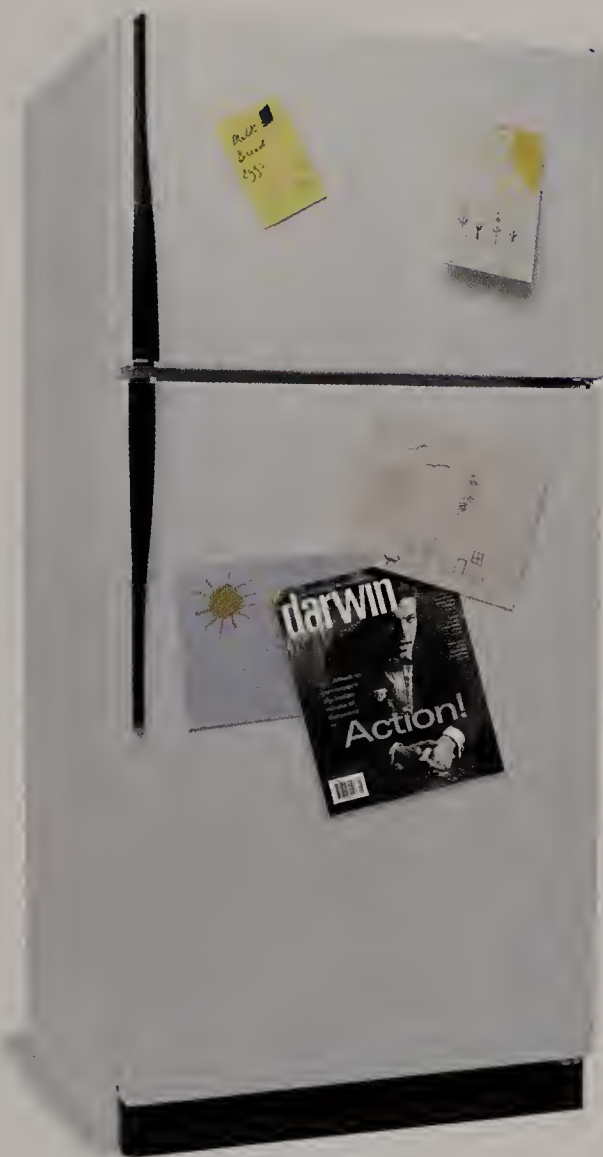
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spin cycle

- What exactly are you using? Which modules? What version? Make sure that you're comparing apples to apples. Many large systems have several modules. It is unlikely that a reference is using all of them. Clients rarely use more than 50 percent of a system's features and functionality. You want to talk to someone who is using the features and modules that you want to use. If the reference is using a system that is several versions old, the new system may have bugs in it. If they've upgraded, ask if the transition was easy.

- How are you using the system? This might be useful for you to know—it could be applicable to your business. Or, the reference could be using the system in a

smoother. If you have a hard start date, you need to know if you'll be able to make it. Also, based on the date your system will go "live," a software salesperson may know who will implement your system. If so, ask to talk to references that used the same implementation team to find out if there were any glitches.

- What additional modules are you planning to use in the future? This question could reveal to what extent the company is putting its future in the system. You could find out that it's going to scrap the system and get a new one next year.

- What about the vendor's customer service? Ask the reference if it is currently under a support contract. Ask

Trust that most references won't want to see you make a mistake and will tell you what you need to know if you ask the right questions.

way that is not applicable to your situation; you might need another reference to replace this one. Find out what operating system and hardware are being used. The environment can affect performance.

- How long has the system been up and running? You want to know if the reference is a long-time user or a company that just implemented the system and hasn't experienced any problems.

- How many simultaneous users do you have? The number of simultaneous users can affect system performance. How is the performance when all of the users are on the system?

- Why did you choose the system? What are its strengths? What are its limitations? Basically, you want to know why the company made the decision to go with the vendor. You might be surprised by what the reference says. One told me that he chose the system because he had no choice—a simple ultimatum from his boss! You could also discover things that you didn't know the system could do. What one company considers strengths—or weaknesses—could be irrelevant to your situation.

- What are some of the bugs you've seen? If the company has used the system for a while, it has probably seen everything. Find out how the vendor has addressed such issues.

- How long did the implementation take? Implementations can be nightmares. You need to know what to expect. Ask how you could make the implementation

about the responsiveness of the vendor's help desk or if it's ever had any major problems and how they were handled. You are not just buying a solution, you are betting your success on a vendor. You need to know that the company's customer service is acceptable, especially if the system is critical to the success of your department or business.

- How was the training? Was it helpful? Is it worth getting in-house customized training if it is offered?

- Do you attend the user-group meetings? Many vendors have user groups—local groups of clients using the vendor's software. Find out if the reference attends the user-group meetings and what the company's experience has been. You should also try to attend the next user-group meeting to hear from companies that are not references. You will get a chance to hear the good, the bad and the ugly.

Lastly, don't just call the references supplied by the salesperson. Randomly call companies on the vendor's client list and explain that you are considering buying the system. Tell them that you want to talk to someone who can give you an honest answer. You'll find most people are more than willing to help you avoid being the victim of vaporware. ■

Wayne E. Pollard, a former marketing director and regional sales manager, always checks references before making a major purchase. You can reach him at wpollard@home.com. Send column ideas and comments to spincycle@darwinmag.com.

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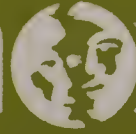


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Knowing what these acronyms mean is one thing.

**Knowing what they mean to your business
is everything.**

 **darwin**  **DIALOGUES²⁰⁰¹**

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Index of Companies and Advertisers

Editorial, Advertising and Business

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Company Index

About.com Inc.	98
AirTran Holdings Inc.	42
AMR Research Inc.	50
Babylon.com Ltd.	98
Best Buy	70
BMW Manufacturing Corp.	16
Branders.com	81
Charles Schwab Corp., The	42
CIBC World Markets	60
Cisco Systems Inc.	81
Design Continuum	16
Earthlink Inc.	81
eBay Inc.	50
EqualFooting.com Inc.	81
Gartner Inc.	81
Harrah's Entertainment Inc.	60
I Can't Believe It's Yogurt	50
Mail Boxes Etc.	50
Master Lock	16
Meta Group Inc.	81
Motorola Inc.	16
NuEdge Systems LLC	81
Orbiscom	98
Patricia Seybold Group Inc.	81
Sallie Mae Inc.	98
SpeechWorks International Inc.	42
Tellme Networks Inc.	42
TruSecure Corp.	98
UAL Corp.	42
United Parcel Service Inc.	50
Wheelhouse Inc.	81

Advertiser Index

Accenture	7
Ajilon	103

American Power Conversion	101
Aspect	35
AT&T	45
Candle Corp.	2
CDW Computer Centers	43
Changepoint Corp.	85
Cisco Systems	59
Commerce One	16A
Computer Associates	5
Darwin	33, 65, 105, 109, 111
Dell Computer Corp.	8
E-centives	37
eCopy	93
Fujitsu	39
Genuity	14
Global One	67
Hummingbird Communication	99
IDC	107
Infiniti	C2
Infinium Software	63
InterBiz	55
Leading Hotels	97
Maxim Group	11
Meta Secur e-Com Solutions	75
Motient	64A
NetScout Systems Inc.	80
Novient Inc.	40
Predictive Systems Inc.	79
Project Management Leadership	95
PSINet	C3
Radview Software	83
SAP America	53
Segue	69
Sungard Recovery Services	73
Sybase	89
Symantec Corp.	13
Synygy Inc.	47
Unisys Corp.	48, 49
United Messaging	57
Volera	C4
Witness Systems	87
XO Communications	77

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What Is E-Learning?



THE TERM E-LEARNING MAY BE TRENDY, BUT THE

concept itself has been around for decades. E-learning is training that takes place through a network, usually over the Internet or a company intranet. It has its roots in the not-so-sexy world of computer-based training, which appeared in the early '80s and used CD-ROMs to teach mostly technical skills to mostly technical people. Lately, e-learning has evolved into a tool widely used in both the corporate and academic worlds.

With today's e-learning, companies can train salespeople to use a new product, even if offices are in scattered locations. On the academic front, e-learning allows people to take online classes from universities in a variety of subjects. Such heavyweights as Stanford and Harvard now offer nondegree courses over the Web; others offer entire degree programs.

How does e-learning work?

E-learning fits into two categories: synchronous and asynchronous. Synchronous e-learning imitates a classroom, which means classes take place in real-time and connect instructors and students via streaming audio or video or through a chat room. Asynchronous e-learning lets a student access prepackaged training on his own time, working at his own pace and communicating with the instructor or other students through e-mail. Some

vendors specialize in e-learning packages that run over a company's servers. Others use an application service provider model and handle everything from creating a training course to storing the information.

What are the advantages of e-learning?

Time and money. Consider how much your company spends in sending people to training—airfare, hotel bills, phone calls home. All those pricey meals on the company tab. E-learning eliminates costs by allowing a specialist in Sacramento to train an entire group in Singapore without leaving the office. It also offers more accessibility to the instructor and more flexibility for the student.

What are the challenges?

E-learning tends to isolate students physically, which can have negative effects on team building and sociability. Students with an aptitude for verbal expression may suffer in the virtual classroom. Those who feel shy about speaking up in a lecture hall may be more likely to ask their questions in this environment.

Students who get frustrated with the technology may lose faith. Employees having to learn on their own time can add to the workload of an already overstressed population.

Finally, the time and money you save with travel expenses may be spent just on getting the company's e-learning program up and running.

How complex are the technologies related to it?

Though most e-learning packages require only a browser and an Internet connection, certain bells and whistles (like audio or video) require high bandwidth. Technology is only an enabler; you will need a continuum of technologies and methodologies to create the most effective program. 

Have an e-learning experience you want to share? Let us know at learning@darwinmag.com.



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